

# Response to General Notice Letter 104(E)

**San Fernando Valley  
North Hollywood Superfund Site  
Volume II  
(Appendix I)**

May 24, 2006

*Prepared for:*

Vulcan Materials Company

*Prepared by:*

**CDM**

18581 Teller Avenue, Suite 200  
Irvine, California 92612

# Response to General Notice Letter 104(E)

## San Fernando Valley North Hollywood Superfund Site Volume II (Appendix I)

May 24, 2006

*Prepared for:*

Vulcan Materials Company

*Prepared by:*

**CDM**

18581 Teller Avenue, Suite 200  
Irvine, California 92612

# I

## Appendix I

# **Appendix I**

## **Hewitt Landfill Gas Collection System**

### **Permitting and Monitoring Data**



## PERMIT TO OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

Permit No.  
**D33194**  
A/N 164827  
Page 1

This initial permit shall be renewed by 01/01 ANNUALLY unless the equipment is moved, or changes ownership. If the billing for annual renewal fee (Rule 301.5) is not received by the expiration date, contact the District.

Legal Owner

ID 3530

Or Operator:

CALMAT PROPERTIES CO.  
3200 SAN FERNANDO ROAD  
LOS ANGELES, CA 90065  
ATTN: GEORGE COSBY

Equipment

located at: 7245 LAUREL CANYON BLVD., NO. HOLLYWOOD, CALIFORNIA

Equipment Description:

LANDFILL GAS COLLECTION AND FLARING SYSTEM, CONSISTING OF:

1. FLARE, JOHN ZINK, MODEL ZTOF, 8' -0" DIA. X 24' -0" H., 20,000,000 BTU/HR., WITH AN AUTOMATIC SHUTOFF VALVE FOR LANDFILL GAS INLET, FLAME ARRESTOR, UV SCANNER, AND TWO AUTOMATIC TEMPERATURE CONTROLLED AIR DAMPERS.
2. EXHAUST SYSTEM WITH A 50 HP BLOWER AND A 50 HP STANDBY BLOWER VENTING 40 COLLECTION WELLS.
3. FORTY-FIVE (45) COMBINATION PROBES/GAS MIGRATION CONTROL WELLS VENTED TO THE EXHAUST SYSTEM.
4. INLET SEPERATOR, V101, 2' -6" O.D. X 6' -6" TANGENT TO TANGENT, WITH A CONDENSATE SUMP, 16" O.D. X 2' -10" LONG, PVC.
5. CONDENSATE WATER PUMP, P101, 5 HP.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
4. ALL LANDFILL GAS COLLECTED SHALL BE DIRECTED TO THE FLARE FOR COMBUSTION.

ORIGINAL



## PERMIT TO OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

Permit No.  
D33194  
A/N 164827  
Page 2

### CONTINUATION OF PERMIT TO OPERATE

5. THE TEMPERATURE INDICATOR AND RECORDER FOR THE FLARE SHALL BE MAINTAINED IN GOOD OPERATING CONDITION AND SHALL BE OPERATED WHENEVER THE FLARE IS IN OPERATION.
6. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES F SHALL BE MAINTAINED IN THE FLARE STACK AS MEASURED BY THE TEMPERATURE INDICATOR AND RECORDER.
7. THE FLARE FLAME SAFEGUARD SYSTEM WHICH INCLUDES AN AUTOMATIC BLOWER AND FLARE INLET VALVE SHUTOFF SYSTEM, AND AN AUTOMATIC DIALER SHALL BE OPERATED WHENEVER THE FLARE IS IN OPERATION.
8. THE SAFETY SYSTEM SPECIFIED IN CONDITION NO. 7 SHALL BE MAINTAINED IN GOOD OPERATING CONDITION AND SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.
9. THE LANDFILL GAS SUPPLY LINE TO THE FLARE SHALL BE EQUIPPED WITH A FLOW INDICATING AND RECORDING DEVICE TO MEASURE AND RECORD THE QUANTITY OF LANDFILL GAS BEING BURNED IN THE FLARE. THIS FLOW INDICATING AND RECORDING DEVICE SHALL BE IN OPERATION WHENEVER THE FLARE IS IN OPERATION.
10. THE TOTAL VOLUME OF LANDFILL GAS BURNED IN THE FLARE SHALL NOT EXCEED 1500 SCFM.
11. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO TIME OF DAY.
12. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED BY THE APPLICANT WITHIN TWENTY-FOUR (24) HOURS OF A REQUEST BY THE DISTRICT TO CONDUCT A TEST.
13. THE LANDFILL GAS HEADER SHALL BE EQUIPPED WITH A 3/4" NPT SAMPLE PORT WITH PLUG, LOCATED BETWEEN THE BLOWERS AND THE FLARE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE, AND TO ALLOW FOR FLOW MONITORING USING A PITOT TUBE.
14. THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATIONS WITHIN THE FLARE AT ALL TIMES. SAFE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS.
15. THE MAXIMUM FLARE SHELL SKIN TEMPERATURE AT LOCATIONS FOUR (4) FEET BELOW AND ABOVE SAMPLE PORTS SHALL NOT EXCEED 250 DEGREES F., EXCEPT IN SMALL ISOLATED AREAS WHERE INTERNAL METAL INSULATION SUPPORTS ARE IN CONTACT WITH THE FLARE WALL. THESE AREAS SHALL NOT EXCEED 300 DEGREES F.

ORIGINAL



# PERMIT TO OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

PERMIT NO.  
D33194  
A/N 164827  
Page 3

## CONTINUATION OF PERMIT TO OPERATE

16. THE FLAME IN THE FLARE SHALL REMAIN BELOW THE HEIGHT OF THE FLARE'S OPERATING THERMOCOUPLE AT ALL TIMES.
17. ANY BREAKDOWN OR MALFUNCTION OF THE LANDFILL GAS FLARING SYSTEM RESULTING IN THE EMISSION OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD DIRECTOR OF ENFORCEMENT WITHIN ONE HOUR AFTER OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
18. ALL RECORDS REQUIRED BY THIS PERMIT SHALL BE KEPT FOR A PERIOD OF AT LEAST TWO (2) YEARS, AND SHALL BE MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.
19. EMISSIONS OF AIR CONTAMINANTS SHALL NOT EXCEED THE FOLLOWING LIMITS:

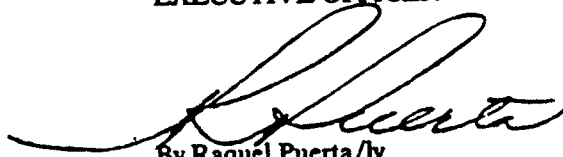
REACTIVE ORGANIC GASES	2.0 LBS/HR
OXIDES OF NITROGEN	1.2 LBS/HR
CARBON MONOXIDE	4.0 LBS/HR
PARTICULATES	3.6 LBS/HR

### NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZED THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

  
By Raquel Puerta/lv  
October 24, 1990

ORIGINAL



**South Coast  
AIR QUALITY MANAGEMENT DISTRICT**

HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

Application Number:

164827

I.D. NO. 3530

**PERMIT TO CONSTRUCT**

Granted as of July 10, 1989

**Legal Owner  
or Operator**

CALMAT PROPERTIES CO.  
3200 SAN FERNANDO RD.  
LOS ANGELES, CA. 90065  
Attn: R. PROSSER

**Equipment Location:** 7245 LAUREL CANYON, LOS ANGELES, CALIFORNIA

The equipment described below and as shown on the approved plans and specifications are subject to the special condition, or conditions listed.

**Equipment Description**

ALTERATION OF THE EXISTING LANDFILL GAS COLLECTION AND FLARING SYSTEM COVERED UNDER APPLICATION NO. 133570 CONSISTING OF:

1. FLARE, 12'-0" DIA. X 14'-6" H., WITH A FOUR FOOT INNER SHROUD EXTENSION AND A PROPANE GAS PILOT BURNER.
2. EXHAUST SYSTEM WITH A 50 H.P. BLOWER AND A 50 H.P. STANDBY BLOWER VENTING 40 COLLECTION WELLS.
3. FORTY-FIVE (45) COMBINATION PROBES/GAS MIGRATION CONTROL WELLS VENTED TO THE EXHAUST SYSTEM.

BY THE ADDITION OF:

1. FLARE, JOHN ZINK, MODEL ZTOP, 8'-0" DIA. X 24'-0" H., 20,000,000 BTU/HR., WITH AN AUTOMATIC SHUTOFF VALVE FOR LANDFILL GAS INLET, FLAME ARRESTOR, UV SCANNER, AND TWO AUTOMATIC TEMPERATURE CONTROLLED AIR DAMPERS.
2. AUTOMATIC IGNITION SYSTEM WITH PROPANE PILOT ASSEMBLY AND AN IGNITION TRANSFORMER, AND TWO (2) FIVE GALLON PROPANE TANKS V-2A AND V-2B.
3. CONDENSATE SUMP V-3, 2'-0" DIA. X 6'-0" L., FIBERGLASS.



## South Coast AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

Application Number:

164827

I.D. NO. 3530

4. TWO (2) INLET SEPARATORS V-1A AND V-1B, EACH 3'-0" DIA. X 10'-0" L., FIBERGLASS, WITH TWO (2) PNEUMATIC LIQUID PUMPS P-1A AND P-1B, MARCH, MODEL AC-4C-MC-AM, 16 GPM EACH.
5. PLANT AIR COMPRESSOR C-1.
6. TWO (2) LANDFILL GAS BLOWERS B-1A AND B-1B, HAUCK, MODEL NO. TBGB-9-071-271, EACH WITH A 25 H.P. MOTOR, VENTING FORTY-FIVE (45) MIGRATION CONTROL WELLS.

AND BY THE CONVERSION TO STANDBY OF THE EXISTING:

1. FLARE, 12'-0" DIA. X 14'-6" H., WITH A FOUR FOOT INNER SHROUD EXTENSION AND A PROPANE GAS PILOT BURNER.
2. EXHAUST SYSTEM WITH TWO (2) 50 H.P. BLOWERS VENTING 40 COLLECTION WELLS.

### Conditions

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT TO CONSTRUCT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
4. ALL LANDFILL GAS COLLECTED SHALL BE DIRECTED TO THE FLARE FOR COMBUSTION.
5. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A TEMPERATURE INDICATOR AND RECORDER WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDER SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION. THE TEMPERATURE SHALL BE RECORDED AT AN ELEVATION OVER THE TOP OF THE FLAME BUT NOT LESS THAN FOUR (4) FEET FROM THE TOP OF THE STACK.



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

Application Number:  
164827  
I.D. NO. 3530

6. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES F. SHALL BE MAINTAINED IN THE FLARE STACK AS MEASURED BY THE TEMPERATURE INDICATOR AND RECORDER. THE THERMOCOUPLE USED TO MEASURE THE TEMPERATURE SHALL BE ABOVE THE FLAME ZONE AND AT LEAST 0.6 SECONDS DOWNSTREAM OF THE BURNER. SUPPLEMENTAL FUEL MUST BE PROVIDED TO THE FLARE WHEN NECESSARY TO MAINTAIN 1400 DEGREES F. IN THE FLARE STACK.
7. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A FAILURE ALARM WITH AN AUTOMATIC SYSTEM, WHICH HAS BEEN APPROVED BY THE EXECUTIVE OFFICER, TO ISOLATE THE FLARE FROM THE LANDFILL GAS SUPPLY LINE. SHUT OFF THE BLOWER AND NOTIFY A RESPONSIBLE PARTY OF THE SHUTDOWN.
8. THE SAFETY SYSTEM SPECIFIED IN CONDITION NO. 7 SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.
9. PRIOR TO OPERATING THIS EQUIPMENT, A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE FLARE TO MEASURE (IN SCFM) AND RECORD THE QUANTITY OF LANDFILL GAS BEING BURNED IN THE FLARE. THIS FLOW INDICATING AND RECORDING DEVICE SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION.
10. THE TOTAL VOLUME OF LANDFILL GAS BURNED IN THE FLARE SHALL NOT EXCEED 1500 SCFM.
11. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO TIME OF DAY.
12. PRIOR TO OPERATION, FOUR SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST FOUR (4) FEET UPSTREAM OF THE FLARE OUTLET AND 90 DEGREES APART. EACH SAMPLING PORT SHALL CONSIST OF A FOUR (4) INCH COUPLING WITH PLUG. AN EQUIVALENT METHOD OF EMISSION SAMPLING MAY BE USED UPON APPROVAL BY THE EXECUTIVE OFFICER. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED BY THE APPLICANT WITHIN TWENTY-FOUR (24) HOURS OF A REQUEST BY THE DISTRICT TO CONDUCT A TEST.
13. PRIOR TO OPERATION, A 3/4" NPT SAMPLE PORT WITH PLUG SHALL BE INSTALLED IN THE LANDFILL GAS HEADER BETWEEN THE BLOWERS, AND THE FLARE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE, AND TO ALLOW FOR FLOW MONITORING USING A PILOT TUBE.
14. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATIONS WITHIN THE FLARE AT ALL TIMES. PERMANENT AND SAFE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS.



## South Coast AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS. 9150 FLAIR DR., EL MONTE, CA 91731

Application Number:  
164827

I.D. NO. 3530

15. THE MAXIMUM FLARE SHELL SKIN TEMPERATURE FOUR (4) FEET BELOW AND ABOVE SAMPLE PORTS SHALL NOT EXCEED 250 DEGREES F., EXCEPT IN SMALL ISOLATED AREAS WHERE INTERNAL METAL INSULATION SUPPORTS ARE IN CONTACT WITH THE FLARE WALL. THESE AREAS SHALL NOT EXCEED 300 DEGREES F.
16. THE FLAME IN THE FLARE SHALL REMAIN BELOW THE HEIGHT OF THE FLARE'S OPERATING THERMOCOUPLE AT ALL TIMES.
17. ANY BREAKDOWN OR MALFUNCTION OF THE LANDFILL GAS FLARING SYSTEM RESULTING IN THE EMISSION OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD DIRECTOR OF ENFORCEMENT WITHIN ONE HOUR AFTER OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
18. WITHIN SIXTY (60) DAYS OF INITIAL OPERATION, THE APPLICANT (CALMAT) SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD TEST PROCEDURES AND FURNISH THE SCAQMD A WRITTEN RESULT OF SUCH PERFORMANCE TESTS WITHIN THIRTY (30) DAYS AFTER THE TESTS ARE CONDUCTED. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD SEVEN (7) DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL AT LEAST FORTY-FIVE (45) DAYS PRIOR TO THE START OF THE TESTS.

THE PERFORMANCE TESTS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO A TEST OF THE INLET LANDFILL GAS TO THE FLARE AND THE FLARE EXHAUST FOR:

- A. METHANE
- B. TOTAL NON-METHANE ORGANICS
- C. OXIDES OF NITROGEN (EXHAUST ONLY)
- D. CARBON MONOXIDE (EXHAUST ONLY)
- E. PARTICULATES (EXHAUST ONLY)
- F. HYDROGEN SULFIDE (INLET ONLY)
- G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED, INLET ONLY)
- H. CARBON DIOXIDE
- I. QUALITATIVE IDENTIFICATION OF CHEMICAL COMPOUNDS IDENTIFIED USING A GAS CHROMATOGRAPHY/MASS SPECTROMETRY METHOD (GC/MS).  
QUANTITATIVELY ANALYZE THE FOLLOWING COMPOUNDS IDENTIFIED BY GC/MS FOR ITS VOLUME CONCENTRATION
  1. BENZENE
  2. CHLOROBENZENE
  3. DICHLOROBENZENE
  4. 1,2 DICHLOROETHANE (ETHYLENE DICHLORIDE)
  5. 1,1 DICHLOROETHENE (VINYLIDENE CHLORIDE)



# South Coast AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

Application Number:

164827

I.D. NO. 3530

6. TETRACHLOROETHYLENE (PERCHLOROETHYLENE)
  7. TETRACHLOROMETHANE (CARBON TETRACHLORIDE)
  8. TOLUENE
  9. 1,1,1 TRICHLOROETHANE (METHYL CHLOROFORM)
  10. TRICHLOROETHYLENE
  11. TRICHLOROMETHANE (CHLOROFORM)
  12. VINYL CHLORIDE
  13. XYLENE
  14. METHYLENE CHLORIDE
  - J. OXYGEN
  - K. NITROGEN
  - L. MOISTURE CONTENT
  - M. FLOW RATE
  - N. TEMPERATURE
19. THE PRIMARY FLARE AND THE STANDBY FLARE SHALL NOT BE OPERATED SIMULTANEOUSLY.
20. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST TWO (2) YEARS AND MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
21. THE EMISSIONS OF AIR POLLUTANTS SHALL NOT EXCEED THE FOLLOWING:
- |               |             |
|---------------|-------------|
| ROG:          | 2.0 LBS/HR. |
| NOx:          | 1.2 LBS/HR. |
| CO:           | 4.0 LBS/HR. |
| PARTICULATES: | 3.6 LBS/HR. |

Approval or denial of this application for permit to operate the above equipment will be made after an inspection to determine if the equipment has been constructed in accordance with the approved plans and specifications and if the equipment can be operated in compliance with all Rules of the South Coast Air Quality Management District.

Please notify R. GOTTSCHALK at 818/572-6203 when construction of equipment is complete.

This Authority to Construct is based on the plans, specifications, and data submitted as it pertains to the release of air contaminants and control measures or reduce air contaminants. No approval or opinion concerning safety and other factors in design, construction or operation of the equipment is expressed or implied.



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

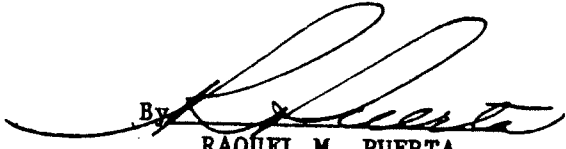
HEADQUARTERS, 9150 FLAIR DR., EL MONTE, CA 91731

Application Number:  
164827  
I.D. NO. 3530

This Permit to Construct shall serve as a temporary Permit to Operate provided the Executive Officer is given prior notice of such intent to operate.

---

This Permit to Construct will become invalid if the Permit to Operate is denied or if this application is cancelled. THIS PERMIT TO CONSTRUCT SHALL EXPIRE TWO YEARS FROM THE DATE OF FILING OF APPLICATION unless an extension is granted by the Executive Officer.

By   
RAQUEL M. PUERTA  
Principal Office Assistant

RMP/jas





# JOHN ZINK COMPANY

TELEX: 497414  
ITT: 4630038  
FAX: 918-744-4334

P.O. BOX 702220  
TULSA, OKLAHOMA 74170

4401 SOUTH PEORIA  
TULSA, OKLAHOMA 74105

918-747-1371

Calmat Properties Co.  
3200 San Fernando Road  
Los Angeles, CA 90065

## ATTENTION:

George Cosby

## GENTLEMEN:

WE ARE ENCLOSING THE FOLLOWING:

REPRODUCIBLE(S) EACH

3 PRINTS EACH

DATE

Oct. 5, 1989

P.O. NO.

S.O. NO.

FS-S74620 XXX "S"

Airborne 2nd Day

( ) FOR CUSTOMER APPROVAL

☒ FINAL - PROCEEDING WITH FABRICATION

( ) FOR CUSTOMER REVISED APPROVAL

( ) REVISED FINAL

COPIES TO BE RETURNED WITH  
COMMENTS AND/OR APPROVAL

( ) PRELIMINARY (INFORMATION ONLY)

( ) VENDOR DRAWINGS (INFORMATION ONLY)

NO.

DRAWING NO.

REMARKS

Spec Sheets 001 thru 007 Rev 0

SCS Field Office  
22010 S. Wilmington Ave Suite 109  
Carson, CA 90745  
XXXXX w/4 prints  
Airborne 2nd Day

RECEIVED  
OCT 6 1989

CALMAT PROPERTIES

YOURS VERY TRULY  
JOHN ZINK COMPANY  
PROJECT ENGINEER

Jim Alfred

cc: JZ West w/print  
JA/gp

RETURN APPROVED PRINTS TO:  
JOHN ZINK COMPANY  
P.O. BOX 702220  
TULSA, OK 74170

PLEASE ACKNOWLEDGE RECEIPT OF THE ABOVE LISTED ITEMS BY SIGNING AND RETURNING THE DUPLICATE OF ALL SHEETS OF THIS TRANSMITTAL TO THE SENDER AT THE ADDRESS SHOWN ABOVE

RECEIVED BY (SIGNATURE)

COMPANY NAME

DATE

\*TRANSMITTAL LETTER



# JOHN ZINK COMPANY

P.O. BOX 702220  
TULSA, OKLAHOMA 74170

4401 SOUTH PEORIA  
TULSA, OKLAHOMA 74105

918-747-1371

TELEX: 487414  
ITT: 4630036  
FAX: 918-744-4334

Calmat Properties Co.,  
3200 San Bernardino Road  
Los Angeles, CA 90065

## ATTENTION:

George Cosby  
GENTLEMEN:

WE ARE ENCLOSING THE FOLLOWING:

\_\_\_\_ REPRODUCIBLE(S) EACH

3 PRINTS EACH

DATE Oct. 5, 1989

P.O. NO.

S.O. NO. FS-S74620 ~~XXX~~ "S"

Airborne 2nd Day

( ) FOR CUSTOMER APPROVAL

(X) FINAL - PROCEEDING WITH FABRICATION

( ) FOR CUSTOMER REVISED APPROVAL

( ) REVISED FINAL

COPIES TO BE RETURNED WITH  
COMMENTS AND/OR APPROVAL

( ) PRELIMINARY (INFORMATION ONLY)

( ) VENDOR DRAWINGS (INFORMATION ONLY)

NO.	DRAWING NO.	REMARKS
-----	-------------	---------

Spec Sheets 001 thru 007 Rev 0

SCS Field Office  
22010 S. Wilshire Blvd. Suite 109  
Carson, CA 90745  
~~XXXX~~ w/6 prints  
Airborne 2nd Day

ACKNOWLEDGMENT

NAME \_\_\_\_\_

DATE \_\_\_\_\_

PLEASE SIGN & RETURN  
UPON RECEIPT OF DRAWINGS

YOURS VERY TRULY  
JOHN ZINK COMPANY  
PROJECT ENGINEER

Jim Alfred

RETURN APPROVED PRINTS TO:  
JOHN ZINK COMPANY  
P.O. BOX 702220  
TULSA, OK 74170

cc: JZ West w/print  
JA/gp

PLEASE ACKNOWLEDGE RECEIPT OF THE ABOVE LISTED ITEMS BY SIGNING AND RETURNING THE DUPLICATE OF ALL SHEETS OF THIS TRANSMITTAL TO THE SENDER AT THE ADDRESS SHOWN ABOVE

RECEIVED BY (SIGNATURE)

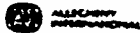
COMPANY NAME

DATE

\*TRANSMITTAL LETTER



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S-74620-001

S.O. NO.

FS-S 74620

PAGE

1 OF 1

1	LOCATION	LOS ANGELES			CUSTOMER	CALMAT PROPERTIES		
2	FACILITY	CALMAT			TAG. NO.			
3	INQ.	JZ P.O. NO.			CUST. P.O. NO.	QTY.		
4	TAG. NO.	ITEM	SUB NO.	QTY				
5	PNL-101	1	003610	1	HOFFMAN #A-1412 CHNF NEMA 4 ENCLOSURE			
6			003521		WITH #A-14 P12 SUB-PANEL			
7								
8		2	NPN	1	WEBSTER #612-6AD202 120V/6000 V.			
9					IGNITION TRANSFORMER			
10			026440					
11								
12								
13								
14					PANEL TO MOUNT ON FLARE & IGNITION			
15					LEAD TO BE ATTACHED TO SPARE PULV BY			
16					JOHN ZINK CO.			
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								

55	PREPARED	JA	DATE	9/28	REV. $\Delta$	DATE	APP.	PART NO.
56	CHECKED		DATE		REV. $\Delta$	DATE	APP.	
57	SECT. APP.		DATE		REV. $\Delta$	DATE	APP.	
	PROJ. APP.		DATE		REV. $\Delta$	DATE	APP.	



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S- 74620-002

S.O. NO.

FS-3 74620

PAGE

1 OF 1

1 LOCATION LOS ANGELES CUSTOMER CALMAT PROPERTIES  
2 FACILITY CALMAT TAG. NO.

3 INQ. JZ P.O. NO. BS74621 CUST. P.O. NO. QTY.

4 ITEM QTY DESCRIPTION

5  
6  
7 FLAME DETECTOR

8 1 ! MFGR : HONEYWELL

9 MODEL NPN : C7012E1112 PURPLE PEEPER

10 TYPE : ULTRAVIOLET

11 MTC : INTEGRAL COLLAR

12 SIZE : 1-IN. NPT

13 TEMP RATING : -20 TO 175°F

14 0216441

15  
16  
17 TAG NO. : BE-101

18  
19  
20

21 ULTRAVIOLET SENSING TUBE

22

23 2 ! MFGR : HONEYWELL

24 MODEL 001723 : 113228

25 TEMP RATING : -20F TO 175°F

26

27 TAG NO. : UN-101

28  
29  
30

31  
32  
33

34  
35  
36

37  
38  
39

40  
41  
42

43  
44  
45

46  
47  
48

49  
50

51 1 FIELD MOUNTED

52 2 SHIP LOOSE - SPARE

53

54 PREPARED JA DATE 9/28

55 CHECKED DATE

56 SECT. APP. DATE

57 PROJ. APP. DATE

REV. A DATE

APP.

PART NO.

REV. A DATE

APP.

REV. A DATE

APP.

REV. A DATE

APP.



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.  
S-74620-004  
S.O. NO.  
FS-574620  
PAGE 1 OF 1

1 LOCATION **LOS ANGELES** CUSTOMER **CALMAT PROPERTIES**  
2 FACILITY **CALMAT** TAG NO.  
3 INQ. JZ P.O. NO. CUST. P.O. NO. QTY.

ITEM	QTY	DESCRIPTION
1	2	* MODUTROL MOTOR
		MFR : HONEYWELL
	001635	MODEL : M744Y-1009
		POWER : 120V / 60 HZ
		POWER CONSUMPTION : 23 WATTS
		DEGREES ROTATION : 90°
		MOTOR TIMING : 30 SEC
		MAX OPERATING TORQUE : 150 lb-IN.
		BALANCE RELAY : NO
		CONTROL SIGNAL : 4-20 MA
		AUX SWITCHES : 2
		ZERO ADJUST : YES
		SPAN ADJUST : YES
	016306	WEATHERPROOFING KIT : 7640JS
	019773	DAMPER LINKAGE : Q405E-1050
	019774	PUSHROD 15-IN. : 27520D

26 TAG NO. : M-101, M-102

**AIR DAMPERS**

2	2	MFR	AMERICAN WARNING & VENT
	NPN	MODEL	VC-41-08
		SIZE	20X36
		POSITIONER	MODUTROL MOTOR
		MATERIAL	GALV. STL
		FRAME	14 GA
		BLADES	16 GA
		BEARINGS	OIL IMPREGNATED BRONZE
		AXLES	1/2 IN. Ø GALV. STEEL

43 TAG NO. AD-101  
44 AD-102

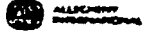
47 \* MOUNTED ON AIR DAMPER BY DAMPER VENDOR

50  
51  
52  
53

54 PREPARED	DATE	REV. DATE	APP.	PART NO.
55 CHECKED	DATE	REV. DATE	APP.	
56 SECT. APP.	DATE	REV. DATE	APP.	
57 PROJ. APP.	DATE	REV. DATE	APP.	



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S-74620-005

S.O. NO.

FS-574620

PAGE

1 OF 1

1 LOCATION LOS ANGELES  
2 FACILITY CALMAT  
3 INQ. JZ P.O. NO. CUST. P.O. NO. TAG. NO. CUSTOMER CALMAT PROPERTIES

4 ITEM QTY DESCRIPTION

5  
6 1 1 FLAME ARRESTOR

7  
8 MEUR. : G-ROTH

9 MODEL NO. : 7628-10-11-F00

10 SIZE : 10-INCH

11 CONN'S. : ISO 16 FF

12 MATERIAL

13 BODY : ALUMINUM

14 TUBE BANK : ALUMINUM

15 DRAIN : EACH END 1/2 INCH

16  
17  
18 TAG NO : FA-101

19  
20  
21 NPK

22  
23 026443

24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53

FIELD MOUNTED

54 PREPARED JA DATE 9/28  
55 CHECKED JA DATE  
56 SECT. APP. DATE  
57 PROJ. APP. DATE  
REV. DATE  
APP.  
PART NO.



**JOHN ZINK  
COMPANY**  
Tulsa, Oklahoma



**SPECIFICATION  
SOLENOID VALVES**

SPEC. NO.

**S-74620-0010**

S.O. NO.

**FS-574625**

PAGE

1 OF 1

LOCATION

**LOS ANGELES**

CUSTOMER

**CALMAT PROPERTIES**

FACILITY

**CALMAT**

TAG. NO.

INQ.

JZ P.O. NO.

CUST. P.O. NO.

QTY.

**GENERAL**

1 Tag No.

**SOV-101**

2 Service

**PROPANE**

3 Line No./Vessel No.

**PILOT**

4 Quantity

**VALVE BODY**

5 Type

**2-WAY**

6 Size — Body/Port

**1/4" 1/8"**

7 Rating & Type Conn.

**N.P.T.**

8 Material — Body

**BRASS**

9 Material — Seat

**BUNA "N"**

10 Material — Diaphragm

**BUNA "N"**

11 Operation Direct/Pilot

**DIRECT**

12 Packless or Type Packed

**PACKLESS**

13 Manual Re-Set

**—**

14 Manual Operator

**—**

**WHEN  
DE-ENERGIZED**

17 2-Way Valve Opens/Close

**CLOSED**

18 3-Way

**—**

19 Vent Port Opens/Close

**—**

20 Press Port Opens/Close

**—**

21 4-Way

**—**

22 Press to Cyl. 1/Cyl. 2

**—**

23 Exh. from Cyl. 1/Cyl. 2

**—**

**SOLENOID**

26 Enclosure

**NEMA 4/7**

27 Voltage/Hz

**120 60**

28 Style of Coil

**A**

29 Single or Double Coil

**SINGLE**

**SERVICE  
CONDITIONS**

32 Fluid

**PROPANE**

33 Qty. Maximum

**44 SCFH**

34 Oper. Diff. Min/Max

**0 250 psig**

35 Allow. Diff. Min/Max

**0 300 psig**

36 Temp. Norm/Max.

**72 110**

37 Oper. sp. gr.

**1.5225**

38 Oper. Viscosity

39 Required Cv

40 Valve Cv

**0.35**

**026444**

45 Manufacturer

**ASCO**

46 Model No.

**8262B233**

Notes:

PREPARED

**JA**

DATE

**9/28**

REV.  $\Delta$  DATE

APP.

PART NO.

CHECKED

DATE

REV.  $\Delta$  DATE

APP.

SECT. APP.

DATE

REV.  $\Delta$  DATE

APP.

PROJ. APP.

DATE

REV.  $\Delta$  DATE

APP.

SPECIFICATION  
**MISCELLANEOUS INSTRUMENTS**

SPEC. NO. **S-74620-007**  
S.O. NO. **PS-574620**  
PAGE **1 OF 1**

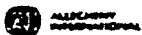
1 LOCATION <b>LOS ANGELES, CA</b>	CUSTOMER <b>CALMAT PROPERTIES</b>
2 FACILITY	TAG. NO.
3 INQ.	JZ P.O. NO.
	CUST. P.O. NO.
4	QTY. <b>1</b>

ITEM	QTY.	
1	1	10" 150# ANSI POSI-SEAL INDAFER VALVE, CARBON STEEL BODY, S.S. DISC AND STEM, TFE SEAL, VITON O-RING AND SHAFT SEAL, FIG # 10-131-12073-11-C-00
		C/W ITT GENERAL CONTROLS #H30A1121B21C2-ESF1F3 HYDRO MOTOR ACTUATOR, SPRING RETURN, NEMA 7, 120VAC, FAIL CLOSED.
		ACTUATOR TO BE EQUIPPED W/ OPEN AND CLOSED LIMIT SWITCHES - NEMA 7
		120 SEC OPEN - 15 SEC CLOSE
		NPN
		026445

54 PREPARED <b>JA</b> DATE <b>9/20</b>	REV. <b>Δ</b> DATE	APP.	PART NO.
55 CHECKED	DATE	REV. <b>Δ</b> DATE	APP.
56 SECT. APP.	DATE	REV. <b>Δ</b> DATE	APP.
57 PROJ. APP.	DATE	REV. <b>Δ</b> DATE	APP.



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION

MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S-74620-001

S.O. NO.

FS-S 74620

PAGE

1 OF 1

1 LOCATION LOS ANGELES CUSTOMER CALMAT PROPERTIES  
2 FACILITY CALMAT TAG. NO.

3 INQ. JZ P.O. NO. CUST. P.O. NO. QTY.

4 TAG NO. ITEM SUB NO. QTY

5 PNL-101 1 003610 1 HOFFMAN #A-1412 CHNF NEMA 4 ENCLOSURE  
6 003527 WITH #A-1412 SUB-PANEL

7  
8 2 NPN 1 WEBSTER #612-6A0202 120V/6000V  
9 IGNITION TRANSFORMER

10 026440

11

12

13 PANEL TO MOUNT ON FLARE & IGNITION  
14 LEAD TO BE ATTACHED TO SPARE PNL BY  
15 JOHN ZINK CO.

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

54 PREPARED JA DATE 9/28 REV. DATE APP. PART NO.  
55 CHECKED DATE REV. DATE APP.  
56 SECT. APP. DATE REV. DATE APP.  
57 PROJ. APP. DATE REV. DATE APP.



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S- 74620-002

S.O. NO.

FS- 374620

PAGE

1 OF 1

1 LOCATION LOS ANGELES CUSTOMER CALMAT PROPERTIES

2 FACILITY CALMAT TAG. NO.

3 INQ. JZ P.O. NO. FS374621 CUST. P.O. NO. QTY.

4 ITEM QTY DESCRIPTION

5

6 FLAME DETECTOR

7

8 1 ! MEGR : HONEYWELL

9 MODEL NPN : CTO12E1112 PURPLE PEEPER

10 TYPE : ULTRAVIOLET

11 MTG : INTEGRAL COLLAR

12 SIZE : 1-IN. NPT

13 TEMP RATING : -20 TO 175°F

14 026441

15

16 TAG NO. : BE-101

17

18

19

20

21 ULTRAVIOLET SENSING TUBE

22

23 2 ! MEGR : HONEYWELL

24 MODEL 001723 : 113228

25 TEMP RATING : -20°F TO 175°F

26

27 TAG NO. : UN-101

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50 1 FIELD MOUNT

51 2 SHIP LOOSE - SPARE

54 PREPARED JA DATE 7/28 REV. Δ DATE APP. PART NO.

55 CHECKED DATE REV. Δ DATE APP.

56 SECT. APP. DATE REV. Δ DATE APP. WORKS

57 PROJ. APP. DATE REV. Δ DATE APP.

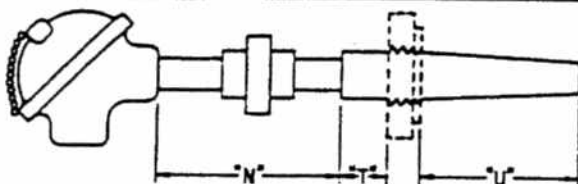
**SPECIFICATION  
THERMOCOUPLES AND THERMOWELLS**

SPEC. NO. **S-74620-003**  
S.O. NO. **FS-574620**  
PAGE **1 OF 1**

LOCATION **LOS ANGELES** CUSTOMER **CALMAT PROPERTIES**  
FACILITY **CALMAT** TAG. NO.  
INQ. JZ P.O. NO. CUST. P.O. NO. QTY.

- Complete Assembly ☒ Other \_\_\_\_\_  
MFR. & Model No. **THERMOSENSOR KB1260-A-26-F24**  
ELEMENT  
MFR. & Model No. **A14-K27**
- ISA Type **K** Wire Size **14 GA (0.064)**
- Sheathed: \_\_\_\_\_ O.D. \_\_\_\_\_ Material \_\_\_\_\_  
Exposed ☐ Grounded ☐ Ungrounded ☐  
Enclosed ☐ Beaded Insulators ☒ Spring Loaded ☐
- Nipple Size Dimension "N" \_\_\_\_\_ Union ☐
- Packed Connector **3/4 INCH NPT**

- HEAD**
- Screw-Cap & Chain ☒ Other \_\_\_\_\_
  - Material **C.I.** Conduit Conn. **1/2 INCH NPT**
  - Terminal Block: Single ☐ Duplex ☒  
WELL OR TUBE
  - Material **INCONEL 600**
  - Construction: Tapered ☐ Straight ☒  
Drilled ☐ Built-Up ☐ Closed End Tube ☒
  - Dimensions: MFR. STD. ☐ O.D. **0.840** I.D. \_\_\_\_\_
  - Connections: Process **3/4 INCH NPT** INT. \_\_\_\_\_
  - Style: Screwed ☒ Flanged ☐



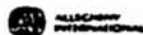
Rev.	Tag No.	Well Dimens.		Element Length	Single Duplex	Type	Gage	Service
		"U"	"T"					
	TE-100	24-IN		27-IN	DUPLEX	K	14	STACK
	TE-101	24-IN		27-IN	DUPLEX	K	14	STACK SPARE
	TE-102	"		"	"	"	"	"
	TE-103	"		"	"	"	"	"
	TE-104	"		"	"	"	"	"
5 - TOTAL T/C REQ'D								
N/A 026442								

Notes:

PREPARED <b>JDA</b>	DATE <b>9-24-89</b>	REV. <b>Δ</b> DATE	APP.	PART NO.
CHECKED	DATE	REV. <b>Δ</b> DATE	APP.	
SECT. APP.	DATE	REV. <b>Δ</b> DATE	APP.	
PROJ. APP.	DATE	REV. <b>Δ</b> DATE <b>12-2-88</b>	APP. <b>BD</b>	



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S-74620-004

S.O. NO.

FS-574620

PAGE

1 OF 1

LOCATION LOS ANGELES

FACILITY CALMAT

CUSTOMER CALMAT PROPERTIES

REQ.

JZ P.O. NO.

TAG NO.

CUST. P.O. NO.

QTY.

ITEM QTY

DESCRIPTION

1 2

\* MODUTROL MOTOR

MFGR

: HONEYWELL

0016351

MODEL

: M744Y-1009

POWER

: 120V / 60 HZ

POWER CONSUMPTION

: 23 WATTS

DEGREES ROTATION

: 90°

MOTOR TIMING

: 30 SEC

MAX OPERATING TORQUE

: 150 lb-IN.

BALANCE RELAY

: NO

CONTROL SIGNAL

: 4-20 MA

AUX SWITCHES

: 2

ZERO ADJUST

: YES

SPAN ADJUST

: YES

016306

WEATHERPROOFING KIT

: 7640JS

019773

DAMPER LINKAGE

: Q605E-1050

019774

PUSHROD 15-IN.

: 27520D

TAG NO.

: M-101, M-102

AIR DAMPERS

2 2  
NPN

MFGR

: AMERICAN WARMING & VENT

MODEL

: VC-41-05

SIZE

026446

: 20X36

POSITIONER

: MODUTROL MOTOR

MATERIAL

: GALV. STL

FRAME

: 14 GA

BLADES

: 16 GA

BEARINGS

: OIL IMPREGNATED BRONZE

AXLES

: 1/2 IN. Ø GALV. STEEL

TAG NO.

AD-101

AD-102

\* MOUNTED ON AIR DAMPER BY DAMPER VENDOR

54 PREPARED

DATE

REV. A DATE

APP.

55 CHECKED

DATE

REV. A DATE

APP.

56 SECT. APP.

DATE

REV. A DATE

APP.

57 PROJ. APP.

DATE

REV. A DATE

APP.

PART NO.



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO. S-74620-005  
S.O. NO. FS-574620  
PAGE 1 OF 1

1 LOCATION LOS ANGELES  
2 FACILITY CALMAT  
3 CUSTOMER CALMAT PROPERTIES  
4 TAG NO.

5 INQ. JZ P.O. NO. CUST. P.O. NO. QTY.

6 ITEM QTY DESCRIPTION

7 1 1 FLAME ARRESTOR

8 MAKE : GROTH

9 MODEL NO. : 7628-10-11-F00

10 SIZE : 10-INCH

11 CONN'S. : 150 LB FF

12 MATERIAL

13 BODY : ALUMINUM

14 TUBE BANK : ALUMINUM

15 DRAIN : EACH END, 1/2 INCH

16

17

18 TAG NO : FA-101

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57



**JOHN ZINK  
COMPANY**  
Tulsa, Oklahoma



ALL-CHEM  
INTERNATIONAL

# SPECIFICATION SOLENOID VALVES

SPEC. NO.

S-74620-004

S.O. NO.

FS-574620

PAGE

1 OF 1

LOCATION

LOS ANGELES

CUSTOMER

CALMAT PROPERTIES

FACILITY

CALMAT

TAG NO.

INQ.

JZ P.O. NO.

CUST. P.O. NO.

QTY.

## GENERAL

1 Tag No.

SOV-101

2 Service

PROPANE

PILOT

3 Line No./Vessel No.

4 Quantity

## VALVE BODY

5 Type

2-WAY

6 Size — Body/Port

1/4" 1/8"

7 Rating & Type Conn.

N.P.T.

8 Material — Body

BRASS

9 Material — Seat

BUNA "N"

10 Material — Diaphragm

BUNA "N"

11 Operation Direct/Pilot

DIRECT

12 Packless or Type Packed

PACKLESS

13 Manual Re-Set

—

14 Manual Operator

—

## WHEN DE-ENERGIZED

17 2-Way Valve Opens/Close

CLOSED

18 3-Way

—

19 Vent Port Opens/Close

20 Press Port Opens/Close

21 4-Way

—

22 Press to Cyl. 1/Cyl. 2

23 Ext. from Cyl. 1/Cyl. 2

## SOLENOID

26 Enclosure

NEMA 4/7

27 Voltage/Hz

120 60

28 Style of Coil

A

29 Single or Double Coil

SINGLE

## SERVICE CONDITIONS

32 Fluid

PROPANE

33 Qty. Maximum

44 SCFH

34 Oper. Diff. Min/Max

0 250 psig

35 Allow. Diff. Min/Max

0 300 psig

36 Temp. Norm/Max

72 110

37 Oper. sd. gr.

1.5225

38 Oper. Viscosity

39 Required Cv

40 Valve Cv

0.35

41

42

43

44

45 Manufacturer

ASCO

46 Model No.

8262B233

Notes

PREPARED

JA

DATE

9/28

REV. A DATE

APP.

CHECKED

DATE

REV. A DATE

APP.

SECT. APP.

DATE

REV. A DATE

APP.

PROJ. APP.

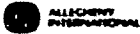
DATE

REV. A DATE

APP.

PART NO.

026444

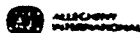


PAGE 10F1

PROJ. APP.	DATE	REV.  DATE	APP.
------------	------	---	------



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION

# MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S-74620-001

S.O. NO.

FS-S 74620

PAGE

1 OF 1

1	LOCATION	LOS ANGELES	CUSTOMER	CALMAT PROPERTIES
2	FACILITY	CALMAT	TAG. NO.	
3	INC.		JZ P.O. NO.	
4			CUST. P.O. NO.	

TAG NO.	ITEM	SUB NO.	QTY	
PNL-101	1	003610	1	HOFFMAN #A-1412 CHNF NEMA 4 ENCLOSURE
		003529		WITH #A-14P12 SUB-PANEL
	2	NPN	1	WEBSTER #612-6A0202 120V/6000V
		026440		IGNITION TRANSFORMER

PANEL TO MOUNT ON FLARE & IGNITION  
LEAD TO BE ATTACHED TO SPARK PLUG BY  
JOHN ZINK CO.

4	PREPARED	JA	DATE	9/28	REV. A	DATE	APP.	PART NO.
55	CHECKED		DATE		REV. A	DATE	APP.	
56	SECT. APP.		DATE		REV. A	DATE	APP.	
57	PROJ. APP.		DATE		REV. A	DATE	APP.	



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S- 74620-002

S.O. NO.

FS- 3 74620

PAGE

1 OF 1

1 LOCATION LOS ANGELES CUSTOMER CALMAT PROPERTIES  
2 FACILITY CALMAT TAG. NO.

3 INQ. JZ P.O. NO. FS374621 CUST. P.O. NO. QTY.

4 ITEM QTY DESCRIPTION

5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53

1 ! MFG : HONEYWELL  
MODEL NPN : C7012E111Z PURPLE PEEPER  
TYPE : ULTRAVIOLET  
MTG : INTEGRAL COLLAR  
SIZE : 1-IN. NPT  
TEMP RATING : -20 TO 175°F

026441

TAG NO. : BE-101

ULTRAVIOLET SENSING TUBE

2 ! MFG : HONEYWELL  
MODEL 001723 : 113228  
TEMP RATING : -20F TO 175°F

TAG NO. : UN-101

1 FIELD MOUNTED  
2 SHIP LOOSE - SIAE

54 PREPARED JA DATE 9/28 REV. A DATE APP. PART NO.  
55 CHECKED DATE REV. A DATE APP.  
56 SECT. APP. DATE REV. A DATE APP. WERS  
57 PROJ. APP. DATE REV. A DATE APP.



**JOHN ZINK  
COMPANY**  
Tulsa, Oklahoma



ALUMINUM  
PREPARATIONS

# SPECIFICATION THERMOCOUPLES AND THERMOWELLS

SPEC. NO.

S-74620-003

S.O. NO.

FS-574620

PAGE

1 OF 1

LOCATION **LOS ANGELES**

FACILITY **CALMAT**

CUSTOMER **CALMAT PROPERTIES**

TAG NO.

INQ.

JZ P.O. NO.

CUST. P.O. NO.

QTY.

1. Complete Assembly ☒ Other \_\_\_\_\_  
MFR. & Model No. **THERMOSENSOR #KB1260-A-26-F24**

ELEMENT

MFR. & Model No. **A14-K27**

2. ISA Type **K** Wire Size **14 GA (0.064)**

3. Sheathed: \_\_\_\_\_ O.D. \_\_\_\_\_ Material \_\_\_\_\_

Exposed ☐ Grounded ☐ Ungrounded ☐

Enclosed ☐ Beaded Insulators ☒ Spring Loaded ☐

4. Nipple Size Dimension "N" \_\_\_\_\_ Union ☐

5. Packed Connector **3/4 INCH NPT**

HEAD

6. Screw-Cap & Chain ☒ Other \_\_\_\_\_

7. Material **C.I.** Conduit Conn. **1/2 INCH NPT**

8. Terminal Block: Single ☐ Duplex ☒

WELL OR TUBE

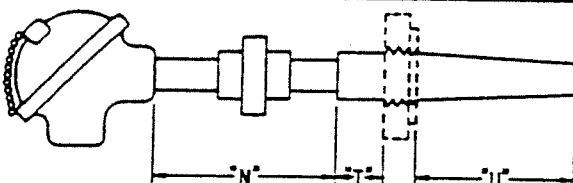
9. Material **INCONEL 600**

10. Construction: Tapered ☐ Straight ☒  
Drilled ☐ Built-Up ☐ Closed End Tube ☒

11. Dimensions: MFR. STD. ☐ O.D. **0.840** I.D. \_\_\_\_\_

12. Connections: Process **3/4 INCH NPT** INT. \_\_\_\_\_

13. Style: Screwed ☒ Flanged ☐



Rev.	Tag No.	Well Dimens.		Element Length	Single Duplex	Type	Gage	Service
		"U"	"T"					
	TE-100	24-IN		27-IN	DUPLEX	K	14	STACK
	TE-101	24-IN		27-IN	DUPLEX	K	14	STACK SPARE
	TE-102	"		"	"	"	"	"
	TE-103	"		"	"	"	"	"
	TE-104	"		"	"	"	"	"
5 - TOTAL T/C REQ'D								
N/A 026442								

Notes:

PREPARED <b>JDA</b>	DATE <b>9-28-89</b>	REV. <b>A</b> DATE	APP.	PART NO.
CHECKED	DATE	REV. <b>A</b> DATE	APP.	
SECT. APP.	DATE	REV. <b>A</b> DATE	APP.	
PROJ. APP.	DATE	REV. <b>A</b> DATE <b>12-2-88</b>	APP. <b>ADP</b>	

SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.  
S-74620-004  
S.O. NO.  
FS-574620  
PAGE  
1 OF 1

1 LOCATION **LOS ANGELES** CUSTOMER **CALMAT PROPERTIES**  
2 FACILITY **CALMAT** TAG NO.

3 INQ. JZ P.O. NO. CUST. P.O. NO. QTY.

4 ITEM QTY DESCRIPTION

5  
6 1 2 **\* MODUTROL MOTOR**  
7  
8 MFGR : HONEYWELL  
9 001635 MODEL : M744Y-1009  
10 POWER : 120V / 60 HZ  
11 POWER CONSUMPTION : 23 WATTS  
12 DEGREES ROTATION : 90°  
13 MOTOR TIMING : 30 SEC  
14 MAX OPERATING TORQUE : 150 lb-IN.  
15 BALANCE RELAY : NO  
16 CONTROL SIGNAL : 4-20 MA  
17 AUX SWITCHES : 2  
18 ZERO ADJUST : YES  
19 SPAN ADJUST : YES  
20 016306 WEATHERPROOFING KIT : 7640JS  
21 019773 DAMPER LINKAGE : Q605E-1050  
22 019774 PUSHROD 15-IN. : 27520D  
23  
24  
25  
26  
27  
28  
29  
30

TAG NO. : M-101, M-102

**AIR DAMPERS**

31  
32 2 2 MFGR : AMERICAN WARMING & VENT  
33 NPN MODEL : VC-41-08  
34 SIZE : 20X36  
35 POSITIONER : MODUTROL MOTOR  
36 MATERIAL : GALV. STL  
37 FRAME : 14GA  
38 BLADES : 16GA  
39 BEARINGS : OIL IMPREGNATED BRONZE  
40 AXLES : 1/2 IN. Ø GALV. STEEL  
41  
42

TAG NO. AD-101  
AD-102

\* MOUNTED ON AIR DAMPER BY DAMPER VENDOR

54 PREPARED DATE REV. DATE APP. PART NO.  
55 CHECKED DATE REV. DATE APP.  
56 SECT. APP. DATE REV. DATE APP.  
57 PROJ. APP. DATE REV. DATE APP.



JOHN ZINK  
COMPANY  
Tulsa, Oklahoma



SPECIFICATION  
MISCELLANEOUS INSTRUMENTS

SPEC. NO.

S-74620-005

S.O. NO.

FS-574620

PAGE

1 OF 1

1 LOCATION **LOS ANGELES** CUSTOMER **CALMAT PROPERTIES**  
2 FACILITY **CALMAT** TAG NO.

3 INQ. JZ P.O. NO. CUST. P.O. NO. QTY.

4 ITEM QTY DESCRIPTION

5  
6 1 1 FLAME ARRESTOR

7

8 MAKE : GEOTH

9 MODEL NO. : 7628-10-11-F00

10 SIZE : 10-INCH

11 CONN'S. : 150 lb FF

12 MATERIAL

13 BODY : ALUMINUM

14 TUBE BANK : ALUMINUM

15 DRAIN : EACH END, 1/2 INCH

16

17

18 TAG NO : FA-101

19

20

21 NPK

22

23 026443

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100



SPECIFICATION  
SOLENOID VALVES

SPEC. NO.

S-74620-004

S.O. NO.

FS-S74620

PAGE

1 OF 1

LOCATION **LOS ANGELES** CUSTOMER **CALMAT PROPERTIES**  
FACILITY **CALMAT** TAG. NO.  
INQ. JZ P.O. NO. CUST. P.O. NO. QTY.

GENERAL	1	Tag. No.	SOV-101					
	2	Service	PROPANE					
			PILOT					
	3	Line No./Vessel No.						
VALVE BODY	4	Quantity						
	5	Type	2-WAY					
	6	Size — Body/Port	1/4" 1/8"					
	7	Rating & Type Conn.	N.P.T.					
	8	Material — Body	BRASS					
	9	Material — Seat	BUNA "N"					
	10	Material — Diaphragm	BUNA "N"					
	11	Operation Direct/Pilot	DIRECT					
	12	Packless or Type Packed	PACKLESS					
	13	Manual Re-Set	—					
	14	Manual Operator	—					
	WHEN DE-ENERGIZED	15						
		16						
		17	2-Way Valve Opens/Close	CLOSED				
18		3-Way	—					
19		Vent Port Opens/Close						
20		Press Port Opens/Close						
21		4-Way	—					
22		Press to Cyl. 1/Cyl. 2						
SOLENOID	23	Ext. from Cyl. 1/Cyl. 2						
	24							
	25							
	26	Enclosure	NEMA 4/7					
	27	Voltage/Hz	120 60					
	28	Style of Coil	A					
	29	Single or Double Coil	SINGLE					
	30							
SERVICE CONDITIONS	31							
	32	Fluid	PROPANE					
	33	Qty. Maximum	44 SCFH					
	34	Oper. Diff. Min/Max	0 250 psig					
	35	Allow. Diff. Min/Max	0 300 psig					
	36	Temp. Norm/Max.	72 110					
	37	Oper. sp. gr.	1.5225					
	38	Oper. Viscosity						
	39	Required Cv						
	40	Valve Cv	0.35					
	41							
	42							
	43							
	44							
	45	Manufacturer	ASCO					
	46	Model No.	8262B233					

Notes:

PREPARED **JA** DATE **9/28** REV. **A** DATE APP. PART NO.  
CHECKED DATE REV. **A** DATE APP.  
SECT. APP. DATE REV. **A** DATE APP.  
PROJ. APP. DATE REV. **A** DATE APP.

**SPECIFICATION  
MISCELLANEOUS INSTRUMENTS**

SPEC. NO. **S-74620-007**  
S.O. NO. **PS-574620**  
PAGE **1 OF 1**

1	LOCATION	<b>LOS ANGELES, CA</b>	CUSTOMER	<b>CALMAT PROPERTIES</b>
2	FACILITY		TAG. NO.	
3	INQ.	JZ P.O. NO.	CUST. P.O. NO.	QTY. <b>1</b>

ITEM	QTY	
1	1	
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		

**10" 150# ANSI POSI-SEAL INAFER VALVE,  
CARBON STEEL BODY, S.S. DISC AND STEM,  
TFE SEAL, VITON O-RING AND SHAFT  
SEAL, FIG # 10-131-12073-11-C-00**

**C/W ITT GENERAL CONTROLS #H30A1121B21C2-  
ESF1E3 HYDRO MOTOR ACTUATOR, SPRING  
RETURN, NEMA 7, 120VAC, FAIL CLOSED.**

**ACTUATOR TO BE EQUIPPED W/ OPEN AND  
CLOSED LIMIT SWITCHES - NEMA 7**

**120 SEC OPEN - 15 SEC CLOSE**

**NPN**

**026445**

54	PREPARED	<b>JA</b>	DATE	<b>9/28</b>	REV. <b>Δ</b>	DATE	APP.	PART NO.
55	CHECKED		DATE		REV. <b>Δ</b>	DATE	APP.	
56	SECT. APP.		DATE		REV. <b>Δ</b>	DATE	APP.	
57	PROJ. APP.		DATE		REV. <b>Δ</b>	DATE	APP.	





**MANDEVILLE & ASSOCIATES**  
environmental engineering services

DATE: October 20, 1988

PRO. #: 70-1005-

TO: CalMat Company  
3200 San Fernando Road  
Los Angeles, CA 90051  
ATTN: George Cosby

QUANTITY

DESCRIPTION

QUANTITY	DESCRIPTION
<u>1</u>	<u>Executed contract documents for SCAQMD permitting of the proposed</u> <u>Hewitt Flare.</u>

COMMENTS: Due to the recently reduced Flare temperatures, we are trying to identify  
the current operating flows for the existing Flare. I will need to get a  
new proposal from John Zink in order to further clarify the Emission Guarantees.

FOR YOUR: XX USE            APPROVAL            INFORMATION

BY: R Prosser

Richard W. Prosser  
RWP:lr

STANDARD FORM OF AGREEMENT TO ENGAGE THE SERVICES  
OF

70-YP8130

**MANDEVILLE & ASSOCIATES**  
A DIVISION OF KLEINFELDER

ENVIRONMENTAL SERVICES

THIS AGREEMENT, entered into at \_\_\_\_\_ City of Industry  
on the 23 day of September, 1988, by and between \_\_\_\_\_  
CalMet Co., 3200 San Fernando Road, Los Angeles, CA 90051

hereinafter called "Client," and \_\_\_\_\_  
\_\_\_\_\_

hereinafter called "Consultant," is as follows:

The client intends to apply for a SCAQMD permit modification in response to SCAQMD's  
letter requesting additional information.

hereinafter called the "Project." The present owner of record is:

Name: CalMet Co.

Business Address: 3200 San Fernando Road, Los Angeles, CA 90051

Residence: \_\_\_\_\_

The client and consultant for mutual consideration hereinafter set forth, agree as follows:

A. Consultant agrees to perform certain environmental services for client as follows:  
Revise SCAQMD application form for the installation of a new flare and the removal of  
the existing flare at Hewitt landfill. Additionally have certain gas analysis  
performed beyond that required for SMT analysis, and perform air modeling and risk  
assessment (see Attachment "A" for cost breakdown).

B. Client agrees to compensate consultant for such services as follows:  
On a Time and Expenses (T&E) basis against 1988 Kleinfelder Schedule of Charges  
(Exhibit 1) for services outlined in "A" for a not to exceed estimate of \$11,000.  
Any extra work not included in "A" will be covered by an appropriate Change Order  
(Exhibit 2).


C. The standard provisions set forth upon the reverse side are incorporated hereinto and made a  
part of this agreement.

IN WITNESS WHEREOF, the parties hereto have accepted, made and executed this agreement upon the  
terms, conditions, and provisions above stated and on the reverse side hereof, the day and year first above  
written.

CONSULTANT:

By   
Title Douglas M. Isbell  
Engineering Manager

CLIENT:

By   
Title Vice President

The policy of this firm is to recruit and provide equal employment opportunity to all persons without regard to race, color, religion, sex, or national origin and to maintain an active equal employment opportunity. Handicapped persons will be considered for positions within their capability. The firm will ensure that employees are treated equally without regard to their race, color, religion, sex, or national origin, and that equal opportunity and consideration will be afforded to all employees with respect to advancement, promotion, training, firing rates, pay or compensation, transfer, and layoff or termination.

HEWITT/FLARE PERMITTING  
3200 SAN FERNANDO ROAD  
LOS ANGELES, CALIFORNIA 90065

<u>Task</u>	<u>Description</u>	<u>Estimated Cost</u>
1	SCAQMD permit application for Hewitt Landfill	\$ 3,500
2	Landfill gas analysis	1,000*
3	Air model and risk assessment	<u>6,500</u>
	TOTAL	\$11,000

\* Assumes work will be done at the same time SWAT gas analysis is done for sulfur and CO analysis.

J.H. KLEINFELDER &amp; ASSOCIATES

File # \_\_\_\_\_

Change Order No. \_\_\_\_\_

## Request for Authorization to Perform Additional Services

Client: \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Contract Document: \_\_\_\_\_ dated \_\_\_\_\_

Additional Work

<u>Item</u>	<u>Additional Cost</u>	<u>Explanation</u>
-------------	------------------------	--------------------

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

---

Total \_\_\_\_\_

The above request is approved and Mandeville & Associates is authorized to perform the indicated services.

Client: \_\_\_\_\_

Signed \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

MANDEVILLE &amp; ASSOCIATES

Signed \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_



Outten Engineering Company

3633 East Broadway • Long Beach, CA 90803  
Phone: (213) 433-6377 FAX: (213) 439-4453

November 8, 1989

Mr. George Cosby  
Vice-President  
CalMat Properties Co.  
3200 San Fernando Rd  
Los Angeles, CA 90065

Dear Mr. Cosby:

Subject: Soil Conditions for Flare Foundation  
at the Hewitt Landfill Site

We have reviewed Law Environmental's report on the soil conditions for the proposed flare foundation at the Hewitt Pit and understand that there could be 6 to 7 feet of settlement at this site. Obviously this could have a significant impact on the operation of the flare. If the site settles uniformly, the flare and interconnected piping would likely move together and not be damaged. If, however, the site settles non-uniformly, there could be tilting of the foundation and possible damage to the interconnected piping, which could affect the operation of the flare. The two foot thickness of the flare foundation should be able to accommodate uneven settlement under the flare itself, thus precluding damage to the flare. However, movement of the piping connected to the flare could cause damage to the flare at the interconnection.

We understand that you are aware of these conditions because of previous behavior of similar installations and the settlement at the location of the existing flare. If you have any questions regarding this, please contact me at (213) 433-6377.

Very truly yours,

Thomas W. Outten



RECEIVED  
NOV -9 1989

Outten Engineering Company  
3633 East Broadway • Long Beach, CA 90803  
Phone: (213) 433-6377 FAX: (213) 439-4453

CALMAT PROPERTIES

November 8, 1989

Mr. George Cosby  
Vice-President  
CalMat Properties Co.  
3200 San Fernando Rd  
Los Angeles, CA 90065

Dear Mr. Cosby:

Subject: Cost Estimate for Installation of a New Flare Station  
at the Hewitt Landfill Site

We have estimated the cost for SCS Field Services to construct the new flare station at the Hewitt Pit site. The cost estimate is based on the attached plan drawing and the scope of work previously agreed upon, which is described in the attached Scope of Work list.

All existing equipment and appurtenances intended for reuse are assumed to be in satisfactory condition. Any reconditioning required is not included.

The cost estimate does not include the cost of engineering work to design foundations, electrical, and piping. (Approximately one-half of the cost of the engineering work has been invoiced as of October 31, 1989.) In addition, it is anticipated that start-up assistance, as required, will be provided by SCS Field Services under the operation and maintenance agreement.

The construction work is separated into two Phases. Phase I includes installation of the new flare, knock out drum, feed line and blower 1. Phase II includes the installation of blower 2 and demolition of the old flare and knock out drums, regrading and finish site work.

The estimated cost for both phase I and II is \$94,000. SCS Field Services proposes to perform this work on a reimbursable basis using the cost estimate as a "not to exceed without prior authorization" target.

Very truly yours,

A handwritten signature in cursive script that reads 'Thomas W. Outten'.

Thomas W. Outten

Attachments

HEWITT PIT FLARE PROJECT  
SCS-FS CONSTRUCTION SCOPE OF WORK

- o Install new flare.
- o Supply and install piping.
- o Install new piping around blowers and flare.
- o Install new condensate knock out drum and supply tank.
- o Relocate condensate pump and supply and install new above grade connections to leach field casings.
- o Regrade site to fill in low spots.
- o Install site gravel.
- o Demolish and remove old flare and condensate tanks and trap to onsite location. (The cost of disposal of the materials will be determined after the waste is characterized.)

## HEWITT PIT FLARE PROJECT

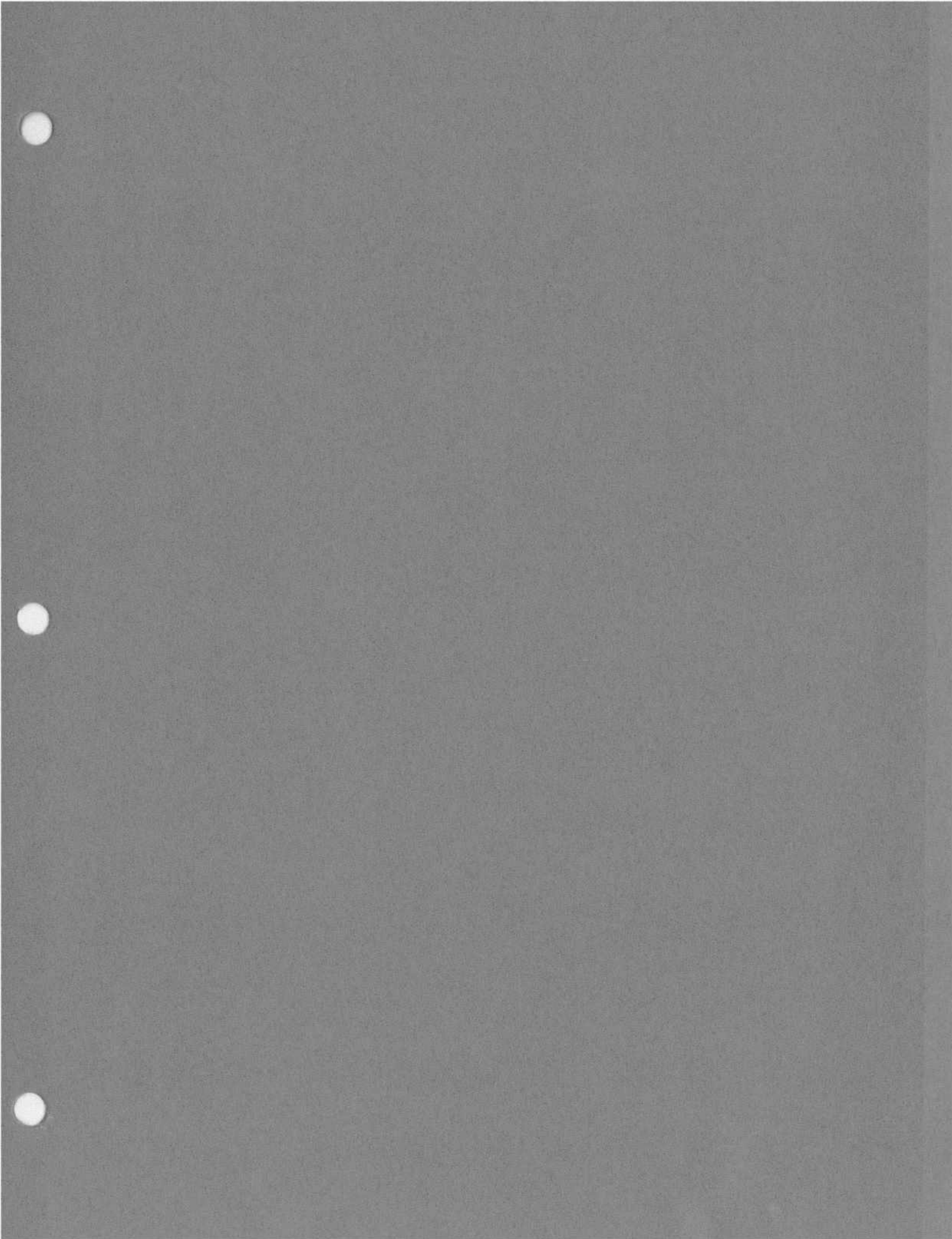
### CALMAT SCOPE OF WORK

- o Obtain permits.
- o Supply flare and related equipment including control valve and flame arrestor.
- o Supply control panel with recorders.
- o Supply flow transmitter.
- o Supply 12" butterfly valves.
- o Supply knock out drum.
- o Supply site gravel and fill material.
- o Furnish trash bin(s).
- o Construct concrete foundations.
- o Provide and install electrical conduit and wiring.
- o Install control panel.
- o Modify electrical rack and shelter as required.
- o Modify roads.
- o Install fencing.
- o Paint as necessary.

## HEWITT PIT FLARE PROJECT

### JOHN ZINK SCOPE OF SUPPLY

- o Flare.
- o Ignition transformer.
- o Enclosure for ignition transformer.
- o Pilot assembly.
- o Pilot solenoid valve.
- o Flame detector.
- o UV sensing tube.
- o Thermocouples and thermowells (5).
- o Air dampers with motors (2).
- o Flame arrestor.
- o Control valve.



A DIVISION OF KLEINFELDER

**MANDEVILLE & ASSOCIATES**

environmental engineering services

DATE February 10, 1989

PRO = 70-1005-01

TO Calmat Properties Co.  
3200 San Fernando Road  
Los Angeles, CA 90065

ATTN: Mr. George Cosby

QUANTITY

DESCRIPTION

1 1988 Emission Forms for SCAQMD.

COMMENTS: George - You need to sign these forms where indicated, and  
attach a check for \$733.60, and mail them prior to March 3, 1989.

FOR YOUR: XX USE        APPROVAL        INFORMATION

BY: R Prosser  
Richard W. Prosser

RWP:lr



# South Coast AIR QUALITY MANAGEMENT DISTRICT

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731 •

3530-BP  
CALMAT PROPERTIES CO.  
3200 SAN FERNANDO RD  
LOS ANGELES CA 90015

January 3, 1989

Equipment Location: 7245 LAUREL CANYON BLVD  
NORTH HOLLYWOOD

Gentlemen:

## INFORMATION ON REPORTING OF ANNUAL AIR POLLUTION EMISSIONS FOR THE CALENDAR YEAR 1988

The South Coast Air Quality Management District requires companies to pay an annual permit fee based on the emissions of air contaminants, as stated in Rule 301(f). The emission fee is authorized by the Lewis Air Quality Management Act of 1976.

The enclosed forms should be used for calculating and reporting your air pollution emissions. Emissions of all air contaminants, including methane, must be accurately reported for emissions inventory and emission fee calculation purposes. Two copies of each form are supplied, one for your records and one to return to the District. Even if you report no fee due, you must complete and return the applicable forms to the District, as we use this data to update our emission inventory. If an emission fee is due, include your payment (make check payable to S.C.A.Q.M.D.) with your forms. If you need any assistance, please telephone the following: If your company name begins with the letters A-E inclusive—Mr. Ted Polychronis, (818) 572-6237; company names beginning with the letters F-O—Mr. Carl Anderson (818) 572-6490; company names beginning with the letters P-Z—Mr. Arthur Lawler, (818) 572-6425.

### Please note some important changes from last year's report:

1. An exemption from payment of fees of 5 tons/yr. (100 tons/yr. of CO), has been introduced on Form C. Form C was modified to reflect the changes.
2. The emissions fee schedules were changed as indicated in Rule 301.2. To assist you with the calculation of fees under these schedules, a new Form, designed as C-1, has been added. The new fee schedules are shown in the attached Rule 301.2 and Form C-1.
3. Additional emission fees are mandated under Sections 90700-90706 of Title 17 of the California Code of Regulations concerning Air Toxics Hot Spots Fee Regulation. These fees are applicable on annual emissions equal to or in excess of 25 tons in total hydrocarbons, NOx, SOx and particulates, and must be paid in addition to the other fees noted on Form C. A detailed description of Air Toxics Hot Spots Fee Regulation also is included in this package for your information. A newly added Form X outlines the method of calculating these fees.
4. Form S has been added summarizing the fees which must be paid as determined on Forms C and X.

Rule 301 requires that your company's forms be in this office within 60 days. If your completed forms are not received by **March 3, 1989**, your permits will be suspended. Also, if your fees are not received by **March 3, 1989**, a penalty fee of 25 percent of the original fee will be imposed. If all emission fees are not received within 120 days from the day of this letter, your permits are subject to revocation.

Very truly yours,

William J. Dennison  
Director of Engineering

TMP:bdp-05411

Enclosures  
Certified Mail  
Return Receipt Requested

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM X

## AIR TOXICS "HOT SPOTS" FOR YEAR 1988

Emission fees mandated under Sections 90700-90706 of Title 17 of the California Code of Regulations concerning Air Toxics "Hot Spots" Fee Regulation.

Company Name <u>Calmat Properties Co.</u> Present Address <u>3200 San Fernando Road</u> City, State <u>Los Angeles, CA 90065</u> Zip _____	I.D. No. <u>00 3530-BB</u>	<b>FOR SCAQMD USE ONLY</b> <hr/> REVIEWED BY: _____ ENTERED: _____
---	----------------------------	--

**INSTRUCTION:** TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS FOR COMP. FORM X.

<b>TOTAL</b>	1. Organic Gases Entry From Line H of Form C .....	1	3		
<b>ORGANIC GASES</b>	2. Methane Entry From Line H of Form C .....	2	69		
	3. Specific Organics Entry From Line H of Form C .....	3	0		
	4. Add lines 1, 2 and 3 .....	4	72		
	5. ....	5	25		
	6. Subtract Line 5 From Line 4 .....	6	47		
	7. If Line 6 is Zero or Greater, Enter Value on Line 4; if Line 6 is Negative, Enter Zero .....	7	72		
<b>NITROGEN OXIDES</b>	8. Nitrogen Oxides Entry From Line H of Form C .....	8	7		
	9. ....	9	25		
	10. Subtract Line 9 From Line 8 .....	10	-18		
	11. If Line 10 is Zero or Greater, Enter Value on Line 8; if Line 10 is Negative, Enter Zero .....	11	0		
<b>SULFUR OXIDES</b>	12. Sulfur Oxides Entry From Line H of Form C .....	12	1		
	13. ....	13	25		
	14. Subtract Line 13 From Line 12 .....	14	-24		
	15. If Line 14 is Zero or Greater, Enter Value on Line 12; if Line 14 is Negative, Enter Zero .....	15	0		
<b>PART. MATTER</b>	16. Particulate Matter Entry From Line H of Form C .....	16	1		
	17. ....	17	25		
	18. Subtract Line 17 From Line 16 .....	18	-24		
	19. If Line 18 is Zero or Greater, Enter Value on Line 16; if Line 18 is Negative, Enter Zero .....	19	0		
<b>EMISSIONS &amp; FEES</b>	20. Add Lines 7, 11, 15 & 19. This is Total Emissions Subject to Fees .....	20	72		
	21. FEES DUE (Multiply Line 20 x 5.55) .....	21	\$399.60		

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988. UNDER PENALTIES OF PERJURY, I DECLARE THAT I HAVE EXAMINED THIS FORM AND THE ACCOMPANYING DOCUMENTS AND STATEMENTS, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, THEY ARE TRUE, CORRECT, AND COMPLETE.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME Richard W. Prosser *R Prosser*

TITLE Senior Consultant Phone No. ( 818 ) 369-2224

Under Section 90704 of Title 17 of the California Code of Regulations, penalties may be imposed by the District for failure to accurately report within sixty (60) days of receipt of the fee assessment notice.

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

## FORM X

### AIR TOXICS "HOT SPOTS" FOR YEAR 1988

Emission fees mandated under Sections 90700-90706 of Title 17 of the California Code of Regulations concerning Air Toxics "Hot Spots" Fee Regulation.

Company Name <b>Calmat Properties Co.</b> Present Address <b>3200 San Fernando Road</b> City, State <b>Los Angeles, CA 90065</b> Zip	I.D. No. <b>00 3530-BB</b>	<b>FOR SCAQMD USE ONLY</b>	
		REVIEWED BY:	ENTERED:

**INSTRUCTION:** TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS FOR COMP. FORM X.

TOTAL ORGANIC GASES	1. Organic Gases Entry From Line H of Form C ..... 2. Methane Entry From Line H of Form C ..... 3. Specific Organics Entry From Line H of Form C ..... 4. Add lines 1, 2 and 3 ..... 5. .... 6. Subtract Line 5 From Line 4 ..... 7. If Line 6 is Zero or Greater, Enter Value on Line 4; if Line 6 is Negative, Enter Zero .....	1 2 3 4 5 6 7	3 69 0 72 25 47 72	
NITROGEN OXIDES	8. Nitrogen Oxides Entry From Line H of Form C ..... 9. .... 10. Subtract Line 9 From Line 8 ..... 11. If Line 10 is Zero or Greater, Enter Value on Line 8; if Line 10 is Negative, Enter Zero .....	8 9 10 11	7 25 -18 0	
SULFUR OXIDES	12. Sulfur Oxides Entry From Line H of Form C ..... 13. .... 14. Subtract Line 13 From Line 12 ..... 15. If Line 14 is Zero or Greater, Enter Value on Line 12; if Line 14 is Negative, Enter Zero .....	12 13 14 15	1 25 -24 0	
PART. MATTER	16. Particulate Matter Entry From Line H of Form C ..... 17. .... 18. Subtract Line 17 From Line 16 ..... 19. If Line 18 is Zero or Greater, Enter Value on Line 16; if Line 18 is Negative, Enter Zero .....	16 17 18 19	1 25 -24 0	
EMISSIONS & FEES	20. Add Lines 7, 11, 15 & 19. This is Total Emissions Subject to Fees ..... 21. FEES DUE (Multiply Line 20 x 5.55) .....	20 21	72 \$399.60	

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988. UNDER PENALTIES OF PERJURY, I DECLARE THAT I HAVE EXAMINED THIS FORM AND THE ACCOMPANYING DOCUMENTS AND STATEMENTS, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, THEY ARE TRUE, CORRECT, AND COMPLETE.

NAME \_\_\_\_\_ Signature \_\_\_\_\_

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME Richard W. Prosser *Richard W. Prosser*

TITLE Senior Consultant Phone No. ( 818 ) 369-2224

Under Section 90704 of Title 17 of the California Code of Regulations, penalties may be imposed by the District for failure to accurately report within sixty (60) days of receipt of the fee assessment notice.

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM S

## SUMMARY OF FEES DUE FOR 1988

Company Name <u>Calmat Properties Co.</u>	I.D. No. <u>003530-BB</u>	FOR SCAQMD USE ONLY	
		REVIEWED BY:	ENTERED:

A. TOTAL FEES DUE THE LEWIS AIR QUALITY MANAGEMENT ACT OF 1976. ENTER AMOUNT FROM LINE M OF FORM C .....	<u>334.</u>
B. EMISSION FEES DUE UNDER THE AIR TOXICS "HOT SPOTS" PROGRAM. ENTER AMOUNT FROM LINE 21 FOR FORM X .....	<u>399.60</u>

GRAND TOTAL 733.60

AFFIX CHECK  
HERE

PLEASE MAKE CHECKS PAYABLE TO S.C.A.Q.M.D. IN THE AMOUNT OF THE GRAND TOTAL AND MAIL TOGETHER WITH ONE COMPLETED COPY OF FORM B-1, B-2, ETC. THROUGH FORM C, FORM X AND FORM S AND MAIL TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621.

FORMS BEARING A POSTMARK LATER THAN MARCH 3, 1989 MAY BE SUBJECT TO PENALTIES PRESCRIBED BY THE DISTRICT'S RULES AND REGULATIONS.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME Richard W. Prosser R Prosser

TITLE Senior Consultant Phone No. ( 818 ) 369-2224

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM S

## SUMMARY OF FEES DUE FOR 1988

Company Name <u>Calmat Properties Co.</u>	I.D. No. <u>003530-BB</u>	FOR SCAQMD USE ONLY	
		REVIEWED BY:	ENTERED:

- A. TOTAL FEES DUE THE LEWIS AIR QUALITY MANAGEMENT ACT OF 1976.  
ENTER AMOUNT FROM LINE M OF FORM C ..... 334.
- B. EMISSION FEES DUE UNDER THE AIR TOXICS "HOT SPOTS" PROGRAM.  
ENTER AMOUNT FROM LINE 21 FOR FORM X ..... 399.60

GRAND TOTAL 733.60

AFFIX CHECK  
HERE

PLEASE MAKE CHECKS PAYABLE TO S.C.A.Q.M.D. IN THE AMOUNT OF THE GRAND TOTAL AND MAIL TOGETHER WITH ONE COMPLETED COPY OF FORM B-1, B-2, ETC. THROUGH FORM C, FORM X AND FORM S AND MAIL TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621. LOS ANGELES, CA 90074-1621.

FORMS BEARING A POSTMARK LATER THAN MARCH 3, 1989 MAY BE SUBJECT TO PENALTIES PRESCRIBED BY THE DISTRICT'S RULES AND REGULATIONS.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME Richard W. Prosser *R Prosser*

TITLE Senior Consultant Phone No. ( 818 ) 369-2224

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C-1

## FEE CALCULATIONS WORKSHEET FOR CALENDAR YEAR 1988

Company Name: Calmat Properties Co. I.D. #: 003530-BB

	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
<b>AA.</b>	EMISSIONS SUBJECT TO FEES (TONS) FROM LINE J ON FORM C  0	EXEMPT  Ø	TOTAL # TONS:  0	TOTAL # TONS:  2	TOTAL # TONS:  0	TOTAL # TONS:  0	TOTAL # TONS:  0
<b>BB.</b>	1-20 TONS ONLY  1-20 TONS: x \$289.00/ton = \$	EXEMPT  Ø	1-20 TONS: x \$52.00/ton = \$	1-20 TONS: 2 x \$167.00/ton = \$ 334	1-20 TONS: x \$200.00/ton = \$	FLAT RATE PER TON:  TOTAL TONS:  x \$2.52/ton	1-20 TONS: x \$221.00/ton = \$
<b>CC.</b>	21 TONS & OVER ONLY  # TONS OVER 20: x \$327.00/ton = \$	EXEMPT  Ø	# TONS OVER 20: x \$58.00/ton = \$	# TONS OVER 20: x \$188.00/ton = \$	# TONS OVER 20: x \$226.00/ton = \$		# TONS OVER 20: x \$250.00/ton = \$
<b>DD.</b>	FEE TOTALS: ADD \$ AMOUNTS OF LINES BB + CC = \$ 0	EXEMPT  Ø	\$ 0	\$ 334	\$ 0	<div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">↓</div> <div style="margin-right: 5px;">↓</div> <div style="margin-right: 5px;">↓</div> </div> \$ 0	\$ 0

**INSTRUCTIONS:** FILL OUT THIS FORM AFTER FORM "C" IS COMPLETE THROUGH LINE J. HEADINGS ON THE CHART ABOVE CORRESPOND TO THE HEADINGS ON FORM "C".

1. LINE AA: Transfer the totals from Line J on Form "C", and enter them under the correct headings above.
2. LINE BB: Multiply your first 1-20 tons by the dollar amount in the appropriate box and enter the total.
3. LINE CC: Multiply the number of tons greater than 20 by the dollar amount in the appropriate box and enter the total
4. FOR CARBON MONOXIDE ONLY: Multiply the total emission tons by the flat rate of \$2.52 and enter the total on LINE DD.
5. LINE DD: Add the total DOLLAR amounts from LINES BB AND CC.
6. TRANSFER THE ENTRIES FROM LINE DD TO LINE K OF FORM C.

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C-1

## FEE CALCULATIONS WORKSHEET FOR CALENDAR YEAR 1988

Company Name: Calmat Properties Co. I.D. #: 003530-BB

	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
<b>AA.</b>	EMISSIONS SUBJECT TO FEES (TONS) FROM LINE J ON FORM C  0	EXEMPT  Ø	TOTAL # TONS:  0	TOTAL # TONS:  2	TOTAL # TONS:  0	TOTAL # TONS:  0	TOTAL # TONS:  0
<b>BB.</b>	1-20 TONS ONLY  1-20 TONS: x \$289.00/ton =\$	EXEMPT  Ø	1-20 TONS: x \$52.00/ton =\$	1-20 TONS: 2 x \$167.00/ton =\$ 334	1-20 TONS: x \$200.00/ton =\$	FLAT RATE PER TON:  TOTAL TONS: x \$2.52/ton	1-20 TONS: x \$221.00/ton =\$
<b>CC.</b>	21 TONS & OVER ONLY  # TONS OVER 20: x \$327.00/ton =\$	EXEMPT  Ø	# TONS OVER 20: x \$58.00/ton =\$	# TONS OVER 20: x \$188.00/ton =\$	# TONS OVER 20: x \$226.00/ton =\$		# TONS OVER 20: x \$250.00/ton =\$
<b>DD.</b>	FEE TOTALS: ADD \$ AMOUNTS OF LINES BB + CC = \$ 0	EXEMPT  Ø	\$ 0	\$ 334	\$ 0	<div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">↓</div> <div style="margin-right: 5px;">↓</div> <div style="margin-right: 5px;">↓</div> <div>0</div> </div>	\$ 0

**INSTRUCTIONS:** FILL OUT THIS FORM AFTER FORM "C" IS COMPLETE THROUGH LINE J. HEADINGS ON THE CHART ABOVE CORRESPOND TO THE HEADINGS ON FORM "C".

1. LINE AA: Transfer the totals from Line J on Form "C", and enter them under the correct headings above.
2. LINE BB: Multiply your first 1-20 tons by the dollar amount in the appropriate box and enter the total.
3. LINE CC: Multiply the number of tons greater than 20 by the dollar amount in the appropriate box and enter the total.
4. FOR CARBON MONOXIDE ONLY: Multiply the total emission tons by the flat rate of \$2.52 and enter the total on LINE DD.
5. LINE DD: Add the total DOLLAR amounts from LINES BB AND CC.
6. TRANSFER THE ENTRIES FROM LINE DD TO LINE K OF FORM C.

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C

## SUMMARY OF EMISSIONS AND DETERMINATION OF FEES FOR PLANT PREMISES FOR CALENDAR YEAR 1988

CALMAT PROPERTIES CO. 7245 LAUREL CANYON BLVD NORTH HOLLYWOOD ID NUMBER: 003530-88	<b>FOR SCAQMD USE ONLY</b>		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">REVIEWED BY:</td> <td style="width: 50%;">ENTERED:</td> </tr> </table>	REVIEWED BY:	ENTERED:
REVIEWED BY:	ENTERED:		

**INSTRUCTION:** TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS PROVIDED ON "GENERAL INSTRUCTION" SHEET

DEADLINE FOR SUBMITTAL MARCH 3, 1989	TOTAL EMISSIONS						
	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
A. FORM B-1, Fuels — General	6325	138,000		13,200	1,860	33,000	2,900
B. FORM B-2, Fuels — I.C. Engines							
C. FORM B-3, Organics							
D. FORM B-4, Process							
E. FORM B-5, Refinery							
F. FORM B-6, Power Plant							
G. Total Emissions lbs./yr. (Sum of lines A thru F)	6325	138,000		13,200	1,860	33,000	2,900
H. Total Emissions, tons/yr. (G ÷ 2000), & transfer to Form X (Round off to the nearest ton)	3	69		7	1	17	1
I. Emissions exempted, tons	5	—	5	5	5	100	5
J. Emissions subject to fee, tons (H-I) (Enter Zero if negative) and transfer to Form C-1, Line AA	0			2	0	0	0
K. Fees for each pollutant (from Form C-1, Line DD), \$	0	0	0	334	0	0	0
M. TOTAL EMISSIONS FEE, Sum of Line K, \$ 334.							

PLEASE SEND FEE PAYMENT AND ONE COPY OF COMPLETED FORMS B-1, B-2, ETC., AND FORM C TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621. TO AVOID LATE PAYMENT PENALTIES, MAKE CHECKS TO S.C.A.Q.M.D., AND MAIL TO BE POSTMARKED NOT LATER THAN MARCH 3, 1989.

THE ABOVE EMISSIONS ARE BASED ON OUR ORGANIZATION OPERATING ON THE FOLLOWING AVERAGE SCHEDULE \_\_\_\_\_  
 \_\_\_\_\_ HOURS/DAY \_\_\_\_\_; DAYS/WEEK AND \_\_\_\_\_ WEEKS/YEAR.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME Richard W. Prosser *R Prosser*

TITLE Senior Consultant Phone No. ( 818 ) 369-2224

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C

## SUMMARY OF EMISSIONS AND DETERMINATION OF FEES FOR PLANT PREMISES FOR CALENDAR YEAR 1988

CALMAT PROPERTIES CO. 7245 LAUREL CANYON BLVD NORTH HOLLYWOOD ID NUMBER: 13530-BB	<b>FOR SCAQMD USE ONLY</b> <hr/> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; padding: 2px;">REVIEWED BY:</td> <td style="width: 50%; border: none; padding: 2px;">ENTERED:</td> </tr> </table>	REVIEWED BY:	ENTERED:
REVIEWED BY:	ENTERED:		

**INSTRUCTION:** TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS PROVIDED ON "GENERAL INSTRUCTION" SHEET

DEADLINE FOR SUBMITTAL MARCH 4, 1989	TOTAL EMISSIONS						
	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
A. FORM B-1. Fuels — General	6325	138,000		13,200	1,860	33,000	2,900
B. FORM B-2. Fuels — I.C. Engines							
C. FORM B-3. Organics							
D. FORM B-4. Process							
E. FORM B-5. Refinery							
F. FORM B-6. Power Plant							
G. Total Emissions lbs./yr. (Sum of lines A thru F)	6325	138,000		13,200	1,860	33,000	2,900
H. Total Emissions, tons/yr. (G ÷ 2000), & transfer to Form X (Round off to the nearest ton)	3	69		7	1	17	1
I. Emissions exempted, tons	5	—	5	5	5	100	5
J. Emissions subject to fee, tons (H-I) (Enter Zero if negative) and transfer to Form C-1, Line AA)	0			2	0	0	0
K. Fees for each pollutant (from Form C-1, Line DD), \$	0	0	0	334	0	0	0
M. TOTAL EMISSIONS FEE, Sum of Line K, \$ <b>334.</b>							

PLEASE SEND FEE PAYMENT AND ONE COPY OF COMPLETED FORMS B-1, B-2, ETC., AND FORM C TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621. TO AVOID LATE PAYMENT PENALTIES, MAKE CHECKS TO S.C.A.Q.M.D., AND MAIL TO BE POSTMARKED NOT LATER THAN **MARCH 3, 1989.**

THE ABOVE EMISSIONS ARE BASED ON OUR ORGANIZATION OPERATING ON THE FOLLOWING AVERAGE SCHEDULE \_\_\_\_\_  
 \_\_\_\_\_ HOURS/DAY \_\_\_\_\_; DAYS/WEEK AND \_\_\_\_\_ WEEKS/YEAR.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME Richard W. Prosser *R Prosser*

TITLE Senior Consultant Phone No. ( 818 ) 369-2224

FOR CALENDAR YEAR 1988  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**FORM B-1: EMISSIONS FROM BURNING OF FUELS--GENERAL**  
*DO NOT USE FOR I.C. ENGINES OR TURBINES*

COMPANY NAME: Calmat Properties Co. I.D. No. 003530-BB  
(Copy the Company Name and I.D. No. as it appears on Form C)

INSTRUCTIONS: Please complete the table below according to the following steps:

1. Enter the annual usage for each type of fuel used in calendar year in millions of cubic feet or thousands of gallons.
2. Calculate emissions for each pollutant by multiplying the annual usage by the emission factors provided.

If you use an alternate emission factor, cross out the emission factor provided and enter the alternate one in the space to the right. A copy of the data which substantiates the numerical value of the alternate emission factor must be provided when you submit this form.

3. Sum up total emissions for each pollutant and transfer the amount to Form C, Line A.

(An example of completing this form for a typical company is illustrated on the back of this form.)

FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
		ORGANIC GASES (1)	METHANE (1)	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Natural Gas	Million cu. ft)	7.0*		213*	0.83*	4.1*	17.5*
LPG Propane Butane	(1000 Gals)	0.26*	0.28*	12.8*	4.6*	3.2*	.28*
Landfill Gas-Flare	736 MMSCFY	6325	138,000	13,200	1860	33,000	2900
Diesel Oil Light Dist. (0.15 S)	(1000 Gals)	2.7*		75*	14*	0.6*	3.6*
Fuel Oil (0.25% S)	(1000 Gals)	2.7*		75*	32.3*	0.6*	4.9*
Fuel Oil (0.50% S)	(1000 Gals)	2.7*		75*	77.6*	0.6*	7.1*
TOTAL EMISSIONS, LBS/YR		6325	138,000	13,200	1860	33,000	2900

\* Emission Factors in lbs per million cu. ft.

\* Emission Factors in lbs per thousand gallons.

(1) See note at top of reverse side.

FOR CALENDAR YEAR 1988  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**FORM B-1: EMISSIONS FROM BURNING OF FUELS--GENERAL**  
DO NOT USE FOR I.C. ENGINES OR TURBINES

COMPANY NAME: Calmat Properties Co. I.D. No. 003530-BB  
(Copy the Company Name and I.D. No. as it appears on Form C)

INSTRUCTIONS: Please complete the table below according to the following steps:

1. Enter the annual usage for each type of fuel used in calendar year in millions of cubic feet or thousands of gallons.
2. Calculate emissions for each pollutant by multiplying the annual usage by the emission factors provided.

If you use an alternate emission factor, cross out the emission factor provided and enter the alternate one in the space to the right. A copy of the data which substantiates the numerical value of the alternate emission factor must be provided when you submit this form.

3. Sum up total emissions for each pollutant and transfer the amount to Form C, Line A.

(An example of completing this form for a typical company is illustrated on the back of this form.)

FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
		ORGANIC GASES (1)	METHANE (1)	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Natural Gas	Million cu. ft)	7.0*		213*	0.83*	4.1*	17.5*
LPG Propane Butane	(1000 Gals)	0.26*	0.28*	12.8*	4.6*	3.2*	.28*
Landfill Gas-Flare	736 MMSCFY	6325	138,000	13,200	1860	33,000	2900
Diesel Oil Light Dist. (0.15% S)	(1000 Gals)	2.7*		75*	14*	0.6*	3.6*
Fuel Oil (0.25% S)	(1000 Gals)	2.7*		75*	32.3*	0.6*	4.9*
Fuel Oil (0.50% S)	(1000 Gals)	2.7*		75*	77.6*	0.6*	7.1*
TOTAL EMISSIONS, LBS/YR		6325	138,000	13,200	1860	33,000	2900

\* Emission Factors in lbs per million cu. ft.

\* Emission Factors in lbs per thousand gallons.

(1) See note at top of reverse side.

**PLEASE  
RETURN EMISSION FEE  
FORMS AND CHECK  
TO THE NEW  
ADDRESS BELOW \*  
SCAQMD  
FILE NO. 21621  
LOS ANGELES, CA 90074-1621**

**\* NOTE: IF YOU INTEND TO SEND THE REPORT BY  
MESSENGER, PLEASE USE OUR STREET ADDRESS:**

**SCAQMD  
9150 Flair Drive  
El Monte, CA 91731**

## GIVEN

- L. F. GAS FLOW TO FLARE  $\hat{=} 1400$  SCFM
- NMHC @ FLARE INLET  $= 4660$  PPM AS C  
(ENSR ANALYSIS - 10/20/88)
- METHANE CONTENT  $= 22.2\%$

## ASSUMPTIONS

- AVE. MW OF NMHC (AS C1)  $= 14$  M.W.
- HEAT CONTENT OF METHANE  $= 1009$  BTU/FT<sup>3</sup>
- NMHC DESTRUCTION EFFICIENCY  $= 95\%$
- METHANE DESTRUCTION "  $= 98\%$
- NOX FORMATION RATE  $< .08$  #/MMBTU
- CO FORMATION RATE  $< .20$  #/MMBTU
- SULFUR CONTENT AS H<sub>2</sub>S  $< 15$  PPM

### 1) ORGANIC GASSES @ FLR OUTLET

$$1400 \text{ SCFM} \times 1440 \times 365 \times 4660 \text{ PPM} \times \frac{14 \text{ lb/mole}}{379.5 \text{ ft}^3/\text{lb mole}} \times (1 - .95) = 6325 \text{ #/YR}$$
$$= 3.2 \text{ TONS/YR}$$

### 2) METHANE IN EXHAUST

$$1400 \text{ SCFM} \times 1440 \times 365 \times 22.2\% \text{ CH}_4 \times (1 - .98) \times \frac{16 \text{ lb/mole}}{379.5 \text{ ft}^3/\text{lb mole}} = 138,000 \text{ #/YR}$$
$$= 69 \text{ TONS/YR}$$

### 3) MMBTU'S BURNED / YEAR IN THE FLARE

$$1400 \text{ SCFM} \times 1440 \times 365 \times 22.2\% \times 1009 \frac{\text{BTU}}{\text{ft}^3} = 165,000 \frac{\text{MMBTU}}{\text{YR}}$$

4) NO<sub>x</sub> IN THE EXHAUST

$$165,000 \frac{\text{MMBTU}}{\text{YR}} \times .08 \#/\text{MMBTU} = 13,200 \#/\text{YR} \\ = 6.6 \text{ TONS/YR}$$

5) CO IN THE EXHAUST

$$165,000 \frac{\text{MMBTU}}{\text{YR}} \times .20 \#/\text{MMBTU} = 33,000 \#/\text{YR} \\ = 16.5 \text{ TONS/YR}$$

6) SO<sub>x</sub> IN THE EXHAUST

$$1400 \text{ SCFM} \times 1440 \times 365 \times (15 \text{ PPM H}_2\text{S}) \times \frac{64 \#/\text{LB mole SO}_2}{379.5 \text{ Lb}^3/\text{LB mole}} = 1860 \#/\text{YR} \\ = .93 \text{ TONS/YR}$$

7) PARTICULATE

FROM FORM B1 FOR NATURAL GAS PARTICULATE  
MATTER IS 17.5 #/MMSCF.

USING THIS FACTOR

$$\text{PARTICULATE} = 1400 \times 1440 \times 365 \times 22.2\% \text{ CH}_4 \times 17.5 \#/\text{MMSCF} \\ = 2900 \#/\text{YR} = 1.45 \text{ TONS/YR}$$

**ENSR**

Formerly ERT

October 24, 1988

Lenda Doane  
Mandeville and Associates  
526 Hofgaarden Street  
City of Industry, Ca. 91744

ENSR Consulting  
and Engineering  
1220 Avenida Acaso  
Camarillo, CA 93010  
(805) 388-3775

Dear Lenda:

Please find enclosed the laboratory analysis report, quality assurance summary, and the COC form for sample number 82948-1 from Hewitt landfill.

The sample was received and analyzed on October 20, 1988. The sample was analyzed for Calderon components, fixed gases, total xylenes, toluene, and non-methane hydrocarbons as methane.

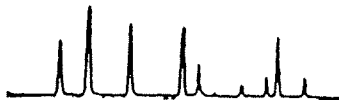
Sincerely,



Fred Thomas  
Laboratory Manager

FT/sea

Reference No. 8700-004-306  
ARS/1924/88

LABORATORY ANALYSIS REPORTCalderon Air Contaminants  
Analysis in Well Gas Samples

P.O. No.: EE-357-70-1032-01  
Project No.: 70-1032-01  
Site : Hewitt  
Date Received : October 20, 1988  
Date Analyzed : October 20, 1988

Sample Concentration in ppmv

ENSR Lab No.: 82958-1  
Sample I.D. No.: LFG #1  
  
Methane 222000  
NMHC 4660 (AS C1)  
Total Hydrocarbons 226660

Sample Concentration in %, v/v

Nitrogen 50.6  
Oxygen 5.45  
Methane 22.2  
Carbon Dioxide 22.8

Sample Concentration in ppbv

Benzene 4300  
Vinyl chloride 750  
Dichloromethane <60  
Trichloromethane 6.75  
1,1,1-trichloroethane <10  
Tetrachloromethane <5  
1,2-dichloroethane <20  
Trichloroethene 407  
Tetrachloroethene 720  
1,2-dibromoethane <1  
Toluene 7600  
Total Xylenes 11000

\* NMHC is total non-methane organics measured and reported as methane.

Fred Thomas  
Laboratory Manager

## QUALITY ASSURANCE SUMMARY (Duplicates Analyses)

P.O. #: EE-357-70-1032-01  
 ENSR Project #: 8700-004-306  
 M&A Project #: 70-1032-01  
 Site: Hewitt

### Well Gas Sample

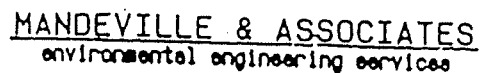
Date Received: October 20, 1988  
 Date Analyzed: October 20, 1988

<u>Component</u>	<u>Duplicates Analyses</u>		<u>Mean</u> <u>Conc.</u>	<u>% Diff.</u> <u>from Mean</u>
	<u>Run #1</u>	<u>Run #2</u>		
	(Concentration, %)			
Nitrogen	50.623	50.685	50.654	0.061
Oxygen	5.442	5.457	5.449	0.14
Carbon Dioxide	22.683	23.016	22.849	0.73
NMHC	4715	4616	4666	1.0

(Concentration in ppb)

Vinyl Chloride	763	730	746.5	2.2
Dichloromethane	38.553	38.737	38.645	0.24
Trichloromethane	6.825	6.680	6.752	1.1
1,1,1-trichloro-ethane	<10	<10	---	---
Tetrachloromethane	<5	<5	---	---
1,2-dichloroethane	<20	<20	---	---
Tetrachloroethene	720.268	719.935	720.102	0.023
1,2-dibromoethane	<1	<1	---	---
Total Xylenes	11222	10712	10967	2.3

A set of 1 sample, laboratory number 82948-1 was analyzed for Calderon components. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicate analyses are an important part of ENSR's quality assurance program. The average % Difference from Mean for 9 duplicate measurements from the sample set of 1 well gas sample is 0.87 %.



CHAIN-OF-CUSTODY RECORD

82948 -

[illegible]

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C

## SUMMARY OF EMISSIONS AND DETERMINATION OF FEES FOR PLANT PREMISES FOR CALENDAR YEAR 1987

VALLEY RECLAMATION CO  
7245 LAUREL CANYON BLVD  
NORTH HOLLYWOOD  
ID NUMBER: 263530-RR

*Name changed to Calmar Properties*

FOR SCAQMD USE ONLY

REVIEWED  
BY:

ENTERED:

INSTRUCTION: TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS PROVIDED ON "GENERAL INSTRUCTION" SHEET.

DEADLINE FOR SUBMITTAL MARCH 4, 1988	TOTAL EMISSIONS						
	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
A. FORM B-1, Fuels — General	490	139,500		13,360	1,990	16,700	2,900
B. FORM B-2, Fuels — I.C. Engines							
C. FORM B-3, Organics							
D. FORM B-4, Process							
E. FORM B-5, Refinery							
F. FORM B-6, Power Plant							
G. Total Emissions lbs./yr. (Sum of lines A thru F)	490	139,500		13,360	1,990	16,700	2,900
H. Total Emissions, tons/yr. (G ÷ 2000) (Round off to the nearest ton)	0	70		7	1	8	1
I. Emissions exempted, tons*	10*		10*	10*	10*	100*	10*
J. Emissions subject to fee, tons (H-I) (Enter Zero if negative, but enter TOTAL of line H if it exceeds values of line I.	0	70		0	0	0	0
K. Fee Rate, \$/ton	241.00	0	43.00	139.00	167.00	2.10	184.00
L. Fee for each pollutant, \$ (JxK)	0	0		0	0	0	0

M. TOTAL EMISSIONS FEE, Sum of Line, \$ 0.00

PLEASE SEND FEE PAYMENT AND ONE COPY OF COMPLETED FORMS B-1, B-2, ETC., AND FORM C TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621. TO AVOID LATE PAYMENT PENALTIES, MAKE CHECKS TO S.C.A.Q.M.D., AND MAIL TO BE POSTMARKED NOT LATER THAN MARCH 4, 1988.

THE ABOVE EMISSIONS ARE BASED ON OUR ORGANIZATION OPERATING ON THE FOLLOWING AVERAGE SCHEDULE  
 \_\_\_\_\_ 24 \_\_\_\_\_ HOURS/DAY \_\_\_\_\_ 7 \_\_\_\_\_ ; DAYS/WEEK AND \_\_\_\_\_ 52 \_\_\_\_\_ WEEKS/YEAR.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1987.

NAME George Cosby Signature [Signature]  
 TITLE Vice President Date 2-11-88 Phone No. (213) 252-2777

IF OTHER THAN ABOVE:

NAME R. Prosser R. PROSSER  
 TITLE CONSULTANT Date 4 FEB 88 Phone No. (818) 369-2224

\*APPLICABLE ONLY FOR QUANTITIES OF 10 TONS OR LESS (100 TONS OR LESS FOR CARBON MONOXIDE).

FOR CALENDAR YEAR 1987  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**FORM B-1: EMISSIONS FROM BURNING OF FUELS--GENERAL**

**DO NOT USE FOR I.C. ENGINES OR TURBINES**

COMPANY NAME: Calmar Properties I.D. No. 953115183  
(Copy the Company Name and I.D. No. as it appears on Form C)

**INSTRUCTIONS:** Please complete the table below according to the following steps:

1. Enter the annual usage for each type of fuel used in calendar year in millions of cubic feet or thousands of gallons.
2. Calculate emissions for each pollutant by multiplying the annual usage by the emission factors provided.

If you use an alternate emission factor, cross out the emission factor provided and enter the alternate one in the space to the right. A copy of the data which substantiates the numerical value of the alternate emission factor must be provided when you submit this form.

3. Sum up total emissions for each pollutant and transfer the amount to Form C, Line A.

(An example of completing this form for a typical company is illustrated on the back of this form.)

FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
		ORGANIC GASES (1)	METHANE (1)	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Natural Gas	Million cu. ft)	7.0*		213*	0.83*	4.1*	17.5*
LPG Propane Butane	(1000 Gals)	0.26*	0.28*	12.8*	4.6*	3.2*	.28*
Landfill Gas Flare	788 MMSCFY	490	139,500	13,360	1,990	16,700	2,900
Diesel Oil Light Dist. (0.15 S)	(1000 Gals)	2.7*		75*	14*	0.6*	3.6*
Fuel Oil (0.25% S)	(1000 Gals)	2.7*		75*	32.3*	0.6*	4.9*
Fuel Oil (0.50% S)	(1000 Gals)	2.7*		75*	77.6*	0.6*	7.1*
TOTAL EMISSIONS, LBS/YR		490	139,500	13,360	1,990	16,700	2,900

- \* Emission Factors in lbs per million cu. ft.
- \* Emission Factors in lbs per thousand gallons.
- (1) See note at top of reverse side.

## CALCULATIONS

### A) ORGANIC GASES @ INLET

$$\frac{788 \text{ MMSCFY}}{379.5 \text{ ft}^3/\text{lbmole}} \times 59 \text{ PPM} \times 80 \frac{\#}{\text{lbmole}} = 9806 \frac{\#}{\text{YR}}$$

### B) ORGANIC GASES IN EXHAUST

$$9806 \frac{\#}{\text{YR}} \times .05 = 490 \frac{\#}{\text{YR}}$$

### C) METHANE IN EXHAUST

$$\frac{788 \text{ MMSCFY}}{379.5 \text{ ft}^3/\text{lbmole}} \times 21\% \text{ CH}_4 \times 16 \frac{\#}{\text{lbmole}} \times .02 = 139,500 \frac{\#}{\text{YR}}$$

### D) MMBTUS BURNED / YEAR IN THE FLARE

$$788 \text{ MMSCFY} \times 1009 \frac{\text{BTU}}{\text{ft}^3 \text{ CH}_4} \times 21\% \text{ CH}_4 = 167,000 \frac{\text{MMBTU}}{\text{YR}}$$

### E) NITROGEN OXIDE IN EXHAUST

$$167,000 \frac{\text{MMBTU}}{\text{YR}} \times .08 \frac{\#}{\text{MMBTU}} = 13,360 \frac{\#}{\text{YR}}$$

### F) SULFUR OXIDE IN EXHAUST

$$\frac{788 \text{ MMSCFY} \times (15 \text{ PPM AS H}_2\text{S})}{379.5 \text{ ft}^3/\text{lbmole}} \times 64 \frac{\#}{\text{lbmole SO}_2} = 1990 \frac{\#}{\text{YR}}$$

## GIVEN

A) AVERAGE 1987 L.F. GAS FLOW RATE  
TO FLARE  
 $= 1500 \text{ SCFM} = 788 \text{ MMSCFY}$

B) AVERAGE 1987 INLET METHANE CONTENT  
OF L.F. GAS  
 $= 21\% \Rightarrow 166 \text{ MMSCFY CH}_4$

C) FROM IT ANALYSIS NMHC CONCENTRATION  
IS  
 $= 59 \text{ PPM}$

## ASSUMPTIONS & FACTORS

- 1) ASSUME NMHC AVERAGE M.W. = 80
- 2) 1009 BTU/ft<sup>3</sup> METHANE
- 3) ASSUME NMHC DESTRUCTION EFF > 95%
- 4) ASSUME METHANE DESTRUCTION EFF > 98%
- 5) ASSUME NO<sub>x</sub> FORMATION RATE < .08 #/MMBTU'S  
(TYPICAL FOR L.F. FLARES)
- 6) ASSUME CO FORMATION RATE < .10 #/MMBTU'S  
(TYPICAL FOR L.F. FLARES)
- 7) ASSUME SULFUR CONCENTRATION AS H<sub>2</sub>S < 15 PPM

G) CARBON MONOXIDE

$$157,000 \frac{\text{MMBTU}}{\text{YR}} \times 10 \frac{\#}{\text{MMBTU}} = 16,700 \frac{\#}{\text{YR}}$$

H) PART. MATTER

FROM FORM B1 FOR NAT. GAS PART MATTER  
IS 17.5 #/MMSCF NATURAL GAS.

APPLYING THIS SAME FACTOR TO THE METHANE  
GAS FRACTION IN THE LANDFILL GAS FLARE

$$\text{PART.} = 788 \text{ MMSCFY} \times 2.1\% \text{ CH}_4 \times 17.5 \frac{\#}{\text{MMSCF CH}_4} = 2900 \frac{\#}{\text{YR}}$$



IT CORPORATION

17605 Fabrica Way  
Cerritos, California 90701  
(213) 921-9831



## CERTIFICATE OF ANALYSIS

TO Valley Reclamation Company  
3200 San Fernando Rd.  
Los Angeles, CA 90065  
Attn: George Cosby

DATE REPORTED April 19, 1984  
PROJECT CODE 29220/sls  
ORDER NUMBER 1512  
PAGE 1 OF 2

Three (3) gas cylinder samples as labeled below.

The samples were analyzed on a Varian 3700 gas chromatograph equipped with a flame ionization detector with the following results.

<u>Compound</u>	<u>Volume Percent (v/v)</u>	<u>Hewitt</u>
Oxygen and/or Argon		3.30
Nitrogen		49.3
Carbon Monoxide		ND<0.005
Methane		21.1
Carbon Dioxide		26.4

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

*Maribeth Webber*

Maribeth Webber

Title Senior Chemist

Approved By

<u>Parts Per Million (v/v)</u>	
<u>Compound</u>	<u>Hewitt</u>
Ethane	11.6
Ethylene	6.1
Propane	4.4
Propylene	4.7
iso-Butane	1.6
n-Butane	TR<1
Butenes	2.1
iso-Pentane	TR<1
n-Pentane	TR<1
Pentenes	ND<1
Hexanes	TR<1
Heptanes	9.2
Benzene	2.7
Toluene	9.5
Vinyl Chloride	2.0
Trichloroethylene	1.7
Perchloroethylene	2.9

ND - This compound was not detected; the limit of detection for this analysis is less than the amount stated in the table above.

TR - Trace, this compound was present, but was below the level at which concentration could be determined.

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM X

## AIR TOXICS "HOT SPOTS" FOR YEAR 1988

Emission fees mandated under Sections 90700-90706 of Title 17 of the California Code of Regulations concerning Air Toxics "Hot Spots" Fee Regulation.

Company Name	FD. No.	FOR SCAQMD USE ONLY	
Present Address		REVIEWED BY:	ENTERED:
City, State			
Zip			

INSTRUCTION: TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS FOR COMP. FORM X.

TOTAL ORGANIC GASES	1. Organic Gases Entry From Line H of Form C	1	3	
	2. Methane Entry From Line H of Form C	2	89	
	3. Specific Organics Entry From Line H of Form C	3	0	
	4. Add lines 1, 2 and 3	4	72	
	5.	5	25	
	6. Subtract Line 5 From Line 4	6	47	
	7. If Line 6 is Zero or Greater, Enter Value on Line 4, if Line 6 is Negative, Enter Zero	7	72	
NITROGEN OXIDES	8. Nitrogen Oxides Entry From Line H of Form C	8	7	
	9.	9	25	
	10. Subtract Line 9 From Line 8	10	-18	
	11. If Line 10 is Zero or Greater, Enter Value on Line 8; if Line 10 is Negative, Enter Zero	11	0	
SULFUR OXIDES	12. Sulfur Oxides Entry From Line H of Form C	12	1	
	13.	13	25	
	14. Subtract Line 13 From Line 12	14	-24	
	15. If Line 14 is Zero or Greater, Enter Value on Line 12; if Line 14 is Negative, Enter Zero	15	0	
PART. MATTER	16. Particulate Matter Entry From Line H of Form C	16	1	
	17.	17	25	
	18. Subtract Line 17 From Line 16	18	-24	
	19. If Line 18 is Zero or Greater, Enter Value on Line 16; if Line 18 is Negative, Enter Zero	19	0	
EMISSIONS & FEES	20. Add Lines 7, 11, 15 & 19. This is Total Emissions Subject to Fees	20	72	
	21. FEES DUE (Multiply Line 20 x 5.55)		399.60	

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988. UNDER PENALTIES OF PERJURY, I DECLARE THAT I HAVE EXAMINED THIS FORM AND THE ACCOMPANYING DOCUMENTS AND STATEMENTS, AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, THEY ARE TRUE, CORRECT, AND COMPLETE.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( ) \_\_\_\_\_

PARER, IF OTHER THAN ABOVE:

NAME \_\_\_\_\_  
TITLE SC CONSULTANT Phone No. ( ) \_\_\_\_\_

Under Section 90704 of Title 17 of the California Code of Regulations, penalties may be imposed by the District for failure to accurately report within sixty (60) days of receipt of the fee assessment notice.

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM S

## SUMMARY OF FEES DUE FOR 1988

Company Name _____	I.D. No. _____	FOR SCAQMD USE ONLY	
		REVIEWED BY: _____	ENTERED: _____

A. TOTAL FEES DUE THE LEWIS AIR QUALITY MANAGEMENT ACT OF 1976.  
ENTER AMOUNT FROM LINE M OF FORM C .....

334.

B. EMISSION FEES DUE UNDER THE AIR TOXICS "HOT SPOTS" PROGRAM.  
ENTER AMOUNT FROM LINE 21 FOR FORM X .....

~~267~~ 399.60

GRAND TOTAL ~~595~~ 733.60

AFFIX CHECK  
HERE

PLEASE MAKE CHECKS PAYABLE TO S.C.A.Q.M.D. IN THE AMOUNT OF THE GRAND TOTAL AND MAIL TOGETHER WITH ONE COMPLETED COPY OF FORM B-1, B-2, ETC. THROUGH FORM C, FORM X AND FORM S AND MAIL TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621.

FORMS BEARING A POSTMARK LATER THAN MARCH 3, 1989 MAY BE SUBJECT TO PENALTIES PRESCRIBED BY THE DISTRICT'S RULES AND REGULATIONS.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988.

NAME \_\_\_\_\_ TYPE OR PRINT Signature \_\_\_\_\_

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME Dr. Prosser \_\_\_\_\_  
FIRM SR CONSULTING \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C-1

## FEE CALCULATIONS WORKSHEET FOR CALENDAR YEAR 1988

Company Name: \_\_\_\_\_ I.D. #: \_\_\_\_\_

	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
A. EMISSIONS SUBJECT TO FEES (TONS) FROM LINE J ON FORM C	TOTAL # TONS:  0	EXEMPT  Ø	TOTAL # TONS:  0	TOTAL # TONS:  2	TOTAL # TONS:  0	TOTAL # TONS:  0	TOTAL # TONS:  0
B. 1-20 TONS ONLY	1-20 TONS:  x \$289.00/ton = \$	EXEMPT  Ø	1-20 TONS:  x \$52.00/ton = \$	1-20 TONS:  x \$167.00/ton = <del>334</del> 334	1-20 TONS:  x \$200.00/ton = \$	FLAT RATE PER TON:  TOTAL TONS:  x \$2.52/ton	1-20 TONS:  x \$221.00/ton = \$
C. 21 TONS & OVER ONLY	# TONS OVER 20:  x \$327.00/ton = \$	EXEMPT  Ø	# TONS OVER 20:  x \$58.00/ton = \$	# TONS OVER 20:  x \$188.00/ton = \$	# TONS OVER 20:  x \$226.00/ton = \$	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">↓</div> <div style="text-align: center;">↓</div> <div style="text-align: center;">↓</div> </div>	# TONS OVER 20:  x \$250.00/ton = \$
D. FEE TOTALS: ADD \$ AMOUNTS OF LINES BB + CC =	\$ 0	EXEMPT  Ø	\$ 0	334 <del>334</del>	\$ 0	\$ 0	\$ 0

**INSTRUCTIONS:** FILL OUT THIS FORM AFTER FORM "C" IS COMPLETE THROUGH LINE J. HEADINGS ON THE CHART ABOVE CORRESPOND TO THE HEADINGS ON FORM "C".

1. LINE AA: Transfer the totals from Line J on Form "C", and enter them under the correct headings above.
2. LINE BB: Multiply your first 1-20 tons by the dollar amount in the appropriate box and enter the total.
3. LINE CC: Multiply the number of tons greater than 20 by the dollar amount in the appropriate box and enter the total.
4. FOR **CARBON MONOXIDE ONLY**: Multiply the total emission tons by the flat rate of \$2.52 and enter the total on LINE DD.
5. LINE DD: Add the total DOLLAR amounts from LINES BB AND CC.
6. TRANSFER THE ENTRIES FROM LINE DD TO LINE K OF FORM C.

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C

## SUMMARY OF EMISSIONS AND DETERMINATION OF FEES FOR PLANT PREMISES FOR CALENDAR YEAR 1988

CALMAT PROPERTIES CO.  
7047 LINDA LANE, CALVERLEY, CALIF.  
NORTH HOLLYWOOD  
ID NUMBER: 777-1000

FOR SCAQMD USE ONLY

REVIEWED  
BY:

ENTERED:

**INSTRUCTION:** TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS PROVIDED ON "GENERAL INSTRUCTION" SHEET.

DEADLINE FOR SUBMITTAL MARCH 31, 1989	TOTAL EMISSIONS						
	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
A. FORM B-1, Fuels — General	6325	138,000		13,200	1,860	33,000	2,900
B. FORM B-2, Fuels — I.C. Engines							
C. FORM B-3, Organics							
D. FORM B-4, Process							
E. FORM B-5, Refinery							
F. FORM B-6, Power Plant							
G. Total Emissions lbs./yr. (Sum of lines A thru F)	6325	138,000		13,200	1,860	33,000	2,900
H. Total Emissions, tons/yr. (G ÷ 2000), & transfer to Form X (Round off to the nearest ton)	3	69		7	1	17	1
I. Emissions exempted, tons	5	—	5	5	5	100	5
J. Emissions subject to fee, tons (H-I) (Enter Zero if negative) and transfer to Form C-1, Line AA)	0	<del>69</del>		2	0	0	0
K. Fees for each pollutant (from Form C-1, Line DD), \$	0	0	0	334	0	0	0
M. TOTAL EMISSIONS FEE, Sum of Line K, \$ <u>334.</u>							

PLEASE SEND FEE PAYMENT AND ONE COPY OF COMPLETED FORMS B-1, B-2, ETC., AND FORM C TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621. TO AVOID LATE PAYMENT PENALTIES, MAKE CHECKS TO S.C.A.Q.M.D., AND MAIL TO BE POSTMARKED NOT LATER THAN **MARCH 3, 1989.**

THE ABOVE EMISSIONS ARE BASED ON OUR ORGANIZATION OPERATING ON THE FOLLOWING AVERAGE SCHEDULE \_\_\_\_\_  
\_\_\_\_\_ HOURS/DAY \_\_\_\_\_; DAYS/WEEK AND \_\_\_\_\_ WEEKS/YEAR.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1988.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARED BY, IF OTHER THAN ABOVE:

NAME \_\_\_\_\_

TITLE \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

FOR CALENDAR YEAR 1988  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

FORM B-1: EMISSIONS FROM BURNING OF FUELS - GENERAL  
(DO NOT USE FOR J.C. ENGINE OR TURBINE)

COMPANY NAME: CALMAT PROPERTIES CO I.D. No.                       
(Copy the Company Name and I.D. No. as it appears on Form C)

INSTRUCTIONS: Please complete the table below according to the following steps:

1. Enter the annual usage for each type of fuel used in calendar year in millions of cubic feet or thousands of gallons.
2. Calculate emissions for each pollutant by multiplying the annual usage by the emission factors provided.

If you use an alternate emission factor, cross out the emission factor provided and enter the alternate one in the space to the right. A copy of the data which substantiates the numerical value of the alternate emission factor must be provided when you submit this form.

3. Sum up total emissions for each pollutant and transfer the amount to Form C, Line A.

(An example of completing this form for a typical company is illustrated on the back of this form.)

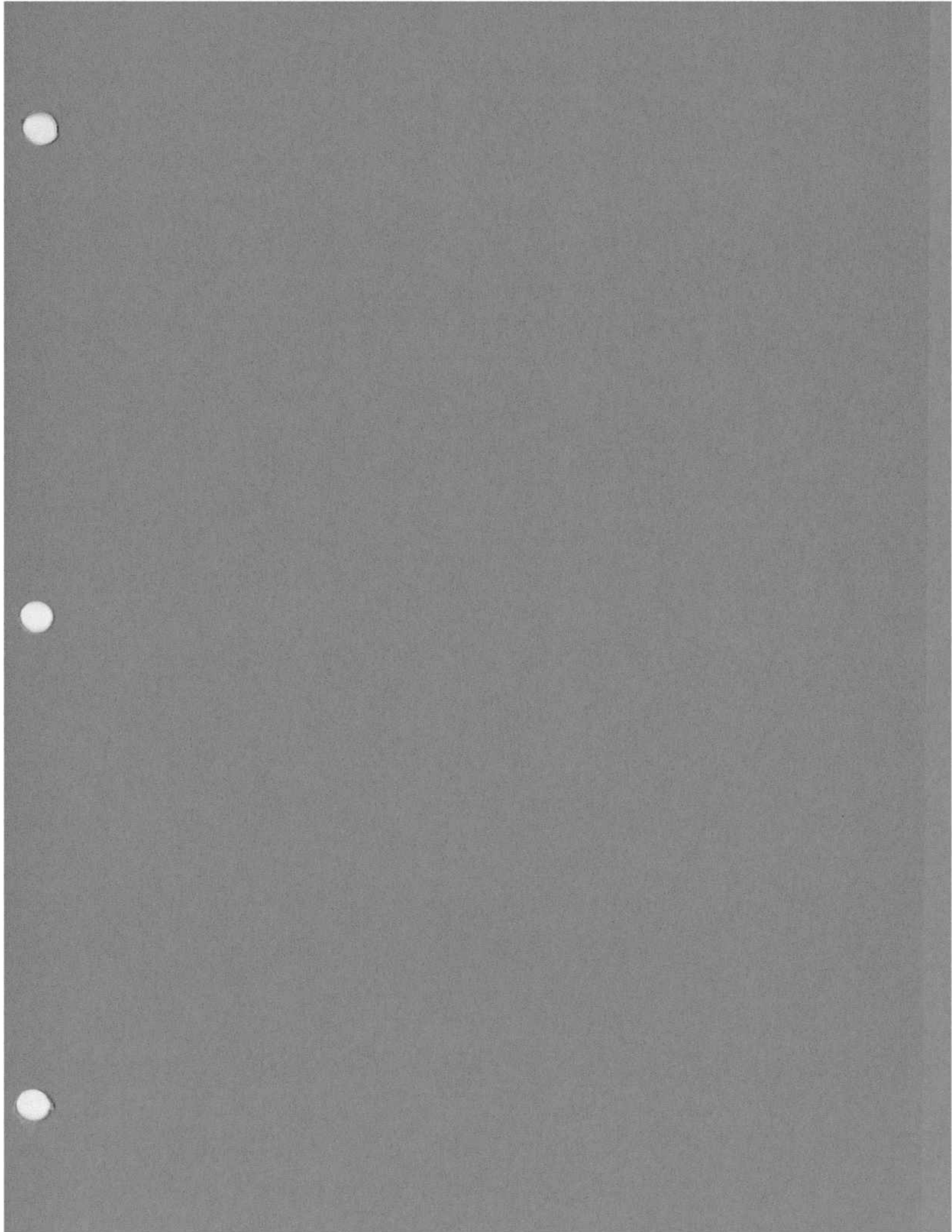
**736 MMSCFY**

FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
		ORGANIC GASES (1)	METHANE (1)	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Natural Gas	Million cu. ft)	7.0*		213*	0.83*	4.1*	17.5*
LPG Propane Butane	(1000 Gals)	0.26*	0.28*	12.8*	4.6*	3.2*	.28*
LANDFILL GAS - FLARE	<del>736 MMSCFY</del> 736 YR	6325	138,000	13,200	1860	33,000	2900
Diesel Oil Light Dist. (0.15 S)	(1000 Gals)	2.7*		75*	14*	0.6*	3.6*
Fuel Oil (0.25% S)	(1000 Gals)	2.7*		75*	32.3*	0.6*	4.9*
Fuel Oil (0.50% S)	(1000 Gals)	2.7*		75*	77.6*	0.6*	7.1*
TOTAL EMISSIONS, LBS/YR		6325	138,000	13,200	1860	33,000	2900

\* Emission Factors in lbs per million cu. ft.

\* Emission Factors in lbs per thousand gallons.

(1) See note at top of reverse side.



RECEIVED

AUG 23 1989

MANDEVILLE & ASSOCIATES  
environmental engineering services

CALMAT PROPERTIES

DATE July 21, 1989

PRO. # 70-1005-09

TO: SCAQMD  
9150 Flair Drive  
El Monte, CA 91731  
ATTN: Robert Gottschalk

QUANTITY

DESCRIPTION

<u>1</u>	<u>Letter to Mr. Tavakoli dated November 15, 1988</u>
<u>1</u>	<u>Letter to Mr. Tavakoli dated December 30, 1988</u>
<u>1</u>	<u>Permit to construct application #164827</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

COMMENTS: We have found the need to revise the permit to construct  
for the Hewitt Landfill. The original permit was not issued  
in accordance with the latest available information. Some errors  
were found, and we had revised the application to reflect the  
equipment that will be installed.

Enclosed are two letters containing information about the  
modifications that have been made. Please review the infor-  
mation and update the permit to construct as soon as possible.

FOR YOUR: XX USE   APPROVAL   INFORMATION  

BY: R Prosser  
Richard W. Prosser

November 15, 1988  
File: 70-10005-09

MANDEVILLE & ASSOCIATES  
environmental engineering services

SCAQMD  
9150 Flair Drive  
El Monte, CA 91731

Attention: Frank Tavakoli

Subject: Hewitt Replacement Flare  
Application No. 164827  
M&A #70-1005-09

Dear Mr. Tavakoli:

This letter is in response to your letter on February 11, 1988 to Mr. G. Cosby at CalMat Properties. In addition to responding to your questions, we also want you to be aware that we have made a small change in the flare size and its installation in the system.

Currently, a flare designed for approximately 5.0 MM scfd is permitted and operating at the site. The current intent is to replace this large flare with this new smaller unit. All blowers, separators, pumps and controls existing at the site will remain in operation.

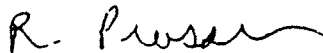
The new flare will be rated for a maximum of 20 MM Btu's per hour with a 4:1 turndown, and a flow range from 300 to 1500 scfm. These values are shown on the attachments.

A letter from John Zink, the proposed flare manufacturer, indicating the guaranteed destruction efficiencies and emissions from the flare, as well as the results of a recent gas analysis are also included.

Please advise the undersigned if any additional information is required in order to complete the processing of this application

Very truly yours,

MANDEVILLE & ASSOCIATES,  
A DIVISION OF KLEINFELDER, INC.



Richard Prosser

RP:ah

Enclosures

cc: G. Cosby



International Headquarters  
P.O. Box 702220  
Tulsa, Oklahoma 74170  
(918) 747-1371

November 4, 1988

Western Regional Office  
11540 South Street, Suite 69  
P.O. Box 2047  
Cerritos, California 90701  
L.A. (213) 563-1151 Local (213) 402-0119

Mandeville & Associates  
526 Hofgaarden Street  
City of Industry, CA 91744

Attention Mr. Dick Prosser

Gentlemen:

Subject: Hewitt Landfill Flare  
John Zink Reference E710-801LA-1

RECEIVED NOV 7 1988

We are pleased to offer the following quotation for a John Zink enclosed Landfill Gas Flare System. This system has been sized for the following criteria as stated in your recent inquiry S70-1005-09

Flow: 300 - 1500 SCFM  
Composition:  $\text{CH}_4$  - 15% to 50%,  $\text{N}_2$  - 4% to 64%  
 $\text{CO}_2$  - 15% to 45%,  $\text{O}_2$  - 1% to 6%

Temperature of Gas: 90°F  
Pressure: 8 in. W.C. at inlier to shut-off valve and 1500 SCFM  
Min. Heating Content = 5.0 MM Btu/hr.  
Max. Heating Content = 20.0 MM Btu/hr.

Equipment Required for one (1) complete system:

#### ZTOF Enclosed Flare

Item 1 One (1) John Zink Landfill Gas ZTOF Enclosed Flame Flare System:

- Two (2) Air control automatic louvers.
- Two (2) inches of cerwool refractory blanket rated at 2200°F. in the combustion chamber.
- Local ignition transformer in a NEMA 4 enclosure for pilot ignition mounted on Flare shell prewired to the pilot.
- Burner assembly with individual burner arms, each with an internal flame arrestor and flame stability tips. Burner inlier is a 10 in. P.F. 150 lb. flange.
- One (1) Duplex stack thermocouples at different elevations.

Mandeville & Associates

Page -2-

November 4, 1988

JZ File P710-801LA-1

- One (1) Natural or Propane gas pilot, removable from outside the Flare shell.
- Two (2) sample connections, 4 inch.
- One (1) U.V. Scanner for detection flame.
- Self-supporting flare stack.
- One (1) trip to jobsite by John Zink personnel to inspect installation of equipment.
- Two (2) sight glasses for flame verification
- Three (3) 3/4" sample connections.

Size: ZTOF Shell is 8'-0" O.D. X 24'-0" O.A.H.

Material: Shell-carbon steel plate A-283C, 1/4 min. thick.

Rain Cap: 304 S.S. plate (weather seal for refractory edge at stack exit).

Refractory: 8 lb. cerwool blanket, 2200°F rated, 310 S.S. studs and lock washers, lock washers wrapped with 1/2" thick blanket in lower half of unit.

Floor: A refractory protected radiation floor to prevent excessive concrete surface temperatures under the ZTOF.

Wind Load: Per UBC.

Structural Design: Per AISC.

Earthquake: Zone 4

Welding: AWS D1.1.

Paint: Commercial sandblast to SP-6

Primer: Ameron inorganic zinc

Finish: Amercote 891

Exposed carbon steel surfaces only

NOTE: This unit is designed to maintain a temperature of 1400°F to 1450°F at the maximum heat release gas case and flowrate. The surface temperature will be 250°F or less except in small isolated areas where internal metal supports are in contact with the outside shell. These areas will see temperatures of 300°F or less.

Ladder: One (1) access ladder with safety belt hooks at access elevations.

Mandeville & Associates  
Page -3-  
November 4, 1988  
JZ File F710-801LA-1

Item 2 Controls

- One (1) Honeywell U.V. Scanner and sensor tube with one (1) spare sensor tube.
- Five (5) thermocouples per Drawings SA-71-0045.
- One (1) Pilot solenoid valve, strainer, regulator, and pressure indicator.
- Two (2) damper assemblies with each having a Honeywell Modutrol M744 actuator mounted.
- Spark ignitor located on the KE-1 Pilot Assembly.
- Webster 612 ignition transformer mounted in a NEMA 4 housing with remote contacts.

NOTE: John Zink is quoting Creative Metal Dampers, 12 ga. frame, 14 ga. blades, SS bearings and rod ends.

Item 3 Valve

- One (1) 10" Posi-Seal Butterfly Valve complete with an IFF General spring return, fail closed, actuator.

NOTE: This is an extremely long delivery item. We currently have several on order for stock, and these are scheduled to be delivered in January.

Item 4 Flame Arrestor

- One (1) 10" Groth Model 7628-10-11-F03 Flame Arrestor Assembly, all aluminum construction. Eccentric design for horizontal installation.

General Notes:

1. Pilot Gas: 44 SCFH of propane at 8 psig per pilot.
2. Ignition Gas: 44 SCFH of propane at 8 psig during ignition (intermittent).
3. Ignition Power: 120 Volt, 60 Cycle, 1 Phase, 5 amps (intermittent).
4. Louver Actuators: 120 Volt power, 4-20 ma control.

Mandeville & Associates  
Page -4-  
November 4, 1988  
JZ File F710-801LA-1

4. Emissions estimate based on an average of 45% methane:

Temperature Control =  $1400^{\circ}\text{F}$  with 0.5 sec. plus retention.

$\text{CO} = 0.2\#/\text{MM BTU}$

$\text{NO}_x = 0.06\#/\text{MM BTU}$

$\text{NMHC} = 99.5\% \text{ D.E.}$

Benzene = 99.5% D.E.

Vinyl Chloride = 99.5% D.E.

Toluene = 99.5% D.E.

Xylene = 99.5% D.E.

NOTE: Destruction guarantees are based on the air dilution as shown on the gas composition.

The following specifications apply to this equipment:

1. Welding - AWS D1.1
2. Weld Examination & Testing - AWS D1.1
3. Structural Mechanical Design - AISI.

All dimensions, material thickness, etc. in this proposal are preliminary and subject to modification, in compliance with specifications, after final engineering.



**ENSR**

Formerly ERT

October 24, 1988

Lenda Doane  
Mandeville and Associates  
526 Hofgaarden Street  
City of Industry, Ca. 91744

ENSR Consulting  
and Engineering  
1220 Avenida Acaso  
Camarillo, CA 93010  
(805) 388-3775

Dear Lenda:

Please find enclosed the laboratory analysis report, quality assurance summary, and the COC form for sample number 82948-1 from Hewitt landfill.

The sample was received and analyzed on October 20, 1988. The sample was analyzed for Calderon components, fixed gases, total xylenes, toluene, and non-methane hydrocarbons as methane.

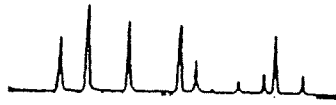
Sincerely,



Fred Thomas  
Laboratory Manager

FT/sea

Reference No. 8700-004-306  
ARS/1924/88



Air Analysis Laboratory

LABORATORY ANALYSIS REPORT

Calderon Air Contaminants  
Analysis in Well Gas Samples

P.O. No.: EE-357-70-1032-01  
Project No.: 70-1032-01  
Site: Hewitt  
Date Received: October 20, 1988  
Date Analyzed: October 20, 1988

Sample Concentration in ppmv

ENSR Lab No.: 82958-1  
Sample I.D. No.: LFG #1  
  
Methane 222000  
NMHC 4660 (AS C1)  
Total Hydrocarbons 226660


Sample Concentration in %, v/v

Nitrogen 50.6  
Oxygen 5.45  
Methane 22.2  
Carbon Dioxide 22.8

Sample Concentration in ppbv

Benzene 4300  
Vinyl chloride 750  
Dichloromethane <60  
Trichloromethane 6.75  
1,1,1-trichloroethane <10  
Tetrachloromethane <5  
1,2-dichloroethane <20  
Trichloroethene 407  
Tetrachloroethene 720  
1,2-dibromoethane <1  
Toluene 7600  
Total Xylenes 11000

\* NMHC is total non-methane organics measured and reported as methane.

  
Fred Thomas  
Laboratory Manager



QUALITY ASSURANCE SUMMARY  
(Duplicates Analyses)

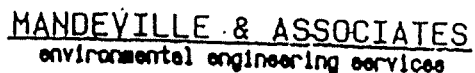
P.O. #: EE-357-70-1032-01  
ENSR Project #: 8700-004-306  
M&A Project #: 70-1032-01  
Site: Hewitt

Well Gas Sample

Date Received: October 20, 1988  
Date Analyzed: October 20, 1988

<u>Component</u>	<u>Duplicates Analyses</u>		<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
	<u>Run #1</u>	<u>Run #2</u>		
	(Concentration, %)			
Nitrogen	50.623	50.685	50.654	0.061
Oxygen	5.442	5.457	5.449	0.14
Carbon Dioxide	22.683	23.016	22.849	0.73
NMHC	4715	4616	4666	1.0
(Concentration in ppb)				
Vinyl Chloride	763	730	746.5	2.2
Dichloromethane	38.553	38.737	38.645	0.24
Trichloromethane	6.825	6.680	6.752	1.1
1,1,1-trichloro-ethane	<10	<10	---	---
Tetrachloromethane	<5	<5	---	---
1,2-dichloroethane	<20	<20	---	---
Tetrachloroethene	720.268	719.935	720.102	0.023
1,2-dibromoethane	<1	<1	---	---
Total Xylenes	11222	10712	10967	2.3

A set of 1 sample, laboratory number 82948-1 was analyzed for Calderon components. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicate analyses are an important part of ENSR's quality assurance program. The average % Difference from Mean for 9 duplicate measurements from the sample set of 1 well gas sample is 0.87 %.



CHAIN-OF-CUSTODY RECORD

82948-

PROJECT NUMBER 70-1032-01		PROJECT NAME HENITT											
SAMPLE CONTAINER PREPARATION				FIELD SAMPLING RECORD									
SAMPLE CONTAINER	PREPARED BY	DATE	TIME	ISSUED TO	SAMPLER CONTAINER	SAMPLER NO.	DATE	TIME	CONDITION IN LAB*	FIELD TESTING			SAMPLER LOCATION
GAS #1 HN	T. Mercer	13 Oct 80	8:10	T. Mercer	GAS #1 HN		20 Oct 80	10:01		CH <sub>4</sub>	O <sub>2</sub>		GAS #1 HN
RELINQUISHED BY: (SIGNATURE) T. Mercer	DATE 13 Oct 80	TIME 8:10	RECEIVED BY: (SIGNATURE) Tina Mercer	RELINQUISHED BY: (SIGNATURE) Tina Mercer	DATE 20 Oct 80	TIME 11:17	RECEIVED BY: (SIGNATURE)	LABORATORY NAME E. R. T.					
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)						
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	SAMPLE DISPOSAL METHOD: (SIGNATURE)	DATE	TIME	DISPOSED OF BY: (SIGNATURE)	COMMENTS:					
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	RECEIVED FOR LABORATORY BY: (SIGNATURE) Susan Amantia	DATE 10/20/80	TIME 11:20	REMARKS *	4					

\* NOTE: EMPTY = E    EMPTY-1/1 = 1    1/4-1/2 = 2

\* NOTE: EMPTY = E    EMPTY-1/4 = 1    1/4-1/2 = 2  
1/2-3/4 = 3    3/4-FULL = 4    OVER FULL = 0

REVIEWED BY: led DATE: 11-7-88

\_\_\_\_\_

December 30, 1988  
File: 70-1005-09

South Coast Air Quality Management District  
9150 Flair Drive  
El Monte, CA 91731

Attention: Frank Tavakoli

Subject: Hewett Permit Application  
Project Number 70-1005-09

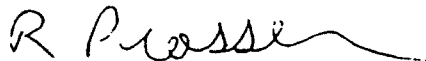
Dear Mr. Tavakoli:

Enclosed is a revised permit to construct for the Hewett landfill for your consideration. Per our discussion, I used the most recent permit issued by SCAQMD to us for a flare station as a go by. I have modified it according to the requirements and conditions that exist at Hewett landfill. We are hoping that by supplying this information it will reduce the time required to issue the permit to construct. I know the landfill owner is anxious to replace the existing flare with the new one and would appreciate any expediting that you may be able to do on this application.

Thank you for your assistance.

Sincerely,

**MANDEVILLE & ASSOCIATES,**  
**A DIVISION OF KLEINFELDER, INC.**



Richard W. Prosser  
Senior Consultant

RWP:DMI:lt

Enclosure

cc: George Cosby

ALTERATION OF THE EXISTING LANDFILL GAS COLLECTION AND FLARE SYSTEM  
CONSISTING OF:

1. 12' Diameter x 14'6" high flare with propane gas pilot and an 8' diameter insert sleeve.
2. 14" automatic shut off valve on the gas inlet to the flare.
3. 14" flame arrestor on flare inlet
4. Two 50 HP electric motor driven Hauck blowers Model # W670-300, two inlet water separators, and two condensate water return pumps.
5. Forty (40) interior and forty-five (45) perimeter vertical wells with associated headers.
6. Thirty-four (34) condensate drains.

BY THE REMOVAL ~~OF~~ FROM ACTIVE SERVICE

1. 12' Diameter x 14'6" high flare with propane gas pilot and an 8' diameter insert sleeve.
2. 14" automatic shut off valves on the gas inlet to the flare.
3. 14" flame arrestor on flare inlet

AND THE ADDITION OF:

1. John Zink ZTOF flare 8' OD x 24' OA height with two automatic temperature controlled air louvers, propane pilot ignition system and two 4" source test ports.
2. 10" automatic shutoff valve on flare inlet.
3. 10" flame arrestor on flare inlet



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS. 9150 FLAIR DR., EL MONTE, CA 91731

Application Number:

~~165641~~ 164827

PERMIT TO CONSTRUCT

Granted as of July 21, 1988.

Legal Owner  
or Operator

~~WATSON ENERGY SYSTEMS, INCORPORATED~~  
~~22010 S. WILMINGTON AVE. - SUITE 400~~  
~~CARSON, CA 90745~~  
~~Attn: M. S. GENEWICK~~

CALM AT

3200 SAN FERNANDO RD  
PO BOX 2950 TERMINAL  
ANGELES  
LOS ANGELES CA. 90051

Equipment Location: ~~1711 WILMINGTON STREET, WILMINGTON, CALIFORNIA~~

7361 LAUREL CANYON BLVD.  
N. HOLLYWOOD, CALIF. 91605

The equipment described below and as shown on the approved plans and specifications are subject to the special condition, or conditions listed.

Equipment Description and Conditions:

← INSERT FROM ATTACHED PAGE.

AIR POLLUTION CONTROL EQUIPMENT CONSISTING OF:

1. ~~FLARE, JOHN ZINK, MODEL ZTOF, 7'-0" O. D. X 30'-0" H., WITH A 7'-0" H. X 4'-0" DIA. TRANSITION PIECE AT THE TOP OF THE STACK, RATED AT 1025 SCFM, WITH A BURNER RATED AT 20,800,000 BTU PER HOUR AND WITH A 8" INTERNAL FLAME ARRESTOR.~~
2. ~~TWO DAMPER ASSEMBLIES, EACH HAVING A HONEYWELL MODUTROL M-744 ACTUATOR.~~
3. ~~AUTOMATED IGNITION SYSTEM WITH PILOT ASSEMBLY AND A WEBSTER 612 IGNITION TRANSFORMER.~~
4. ~~BLOWER, HAUCK, BELT-DRIVEN TYPE, MODEL NO. TBG8 9-061-231E WITH A 20 H.P. MOTOR SERVING THE 38 ACRES AND 24 ACRES INTERNAL GAS COLLECTION AND PERIMETER GAS COLLECTION SYSTEMS.~~

-CONDITIONS-

1. OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT TO CONSTRUCT IS ISSUED UNLESS OTHERWISE NOTED BELOW:
2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9180 FLAMINGO AVE., EL MONTE, CA 91731

Application Number:

~~164827~~ 164827

3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
4. ALL LANDFILL GAS COLLECTED SHALL BE DIRECTED TO THE FLARE, ~~WHICH IS IN THE OPERATION, FOR COMBUSTION, OR TO THE GAS COMPRESSION STATION.~~
5. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A TEMPERATURE INDICATOR AND RECORDER WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDER SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION. THE TEMPERATURE SHALL BE RECORDED AT AN ELEVATION OVER THE TOP OF THE FLAME BUT NOT LESS THAN FIVE (5) FEET FROM THE STACK. TOP OF THE
6. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES F. SHALL BE MAINTAINED IN THE FLARE STACK AS MEASURED BY THE TEMPERATURE INDICATOR AND RECORDER. THE THERMOCOUPLE USED TO MEASURE THE TEMPERATURE SHALL BE ABOVE THE FLAME ZONE AND AT LEAST 0.3 SECONDS DOWSTREAM OF THE BURNER. SUPPLEMENTAL FUEL MUST BE PROVIDED TO THE FLARE WHEN NECESSARY TO MAINTAIN 1400 DEGREES F. IN THE FLARE STACK.
7. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A FAILURE ALARM WITH AN AUTOMATIC SYSTEM, WHICH HAS BEEN APPROVED BY THE EXECUTIVE OFFICER, TO ISOLATE THE FLARE FROM THE LANDFILL GAS SUPPLY LINE, SHUT OFF THE BLOWER AND NOTIFY A RESPONSIBLE PARTY OF THE SHUTDOWN.
8. THE SAFETY SYSTEM SPECIFIED IN CONDITION NO. 7 SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.
9. PRIOR TO OPERATING THIS EQUIPMENT, A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE FLARE TO MEASURE (IN SCFM) AND RECORD THE QUANTITY OF LANDFILL GAS BEING BURNED IN THE FLARE. THIS FLOW INDICATING AND RECORDING DEVICE SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION.
10. THE TOTAL VOLUME OF LANDFILL GAS BURNED IN THE FLARE SHALL NOT EXCEED ~~1500~~ 8CFM.  
1500
11. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO TIME OF DAY.



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9100 FLAMINGO BLVD., EL MONTE, CA 91731

Application Number:

~~165641~~ 164827

12. PRIOR TO OPERATION, TWO SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST FIVE (5) FEET UPSTREAM OF THE FLARE OUTLET AND 90 DEGREES APART. EACH SAMPLING PORT SHALL CONSIST OF A FOUR (4) INCH COUPLING WITH PLUG. AN EQUIVALENT METHOD OF EMISSION SAMPLING MAY BE USED UPON APPROVAL BY THE EXECUTIVE OFFICER. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED BY THE APPLICANT WITHIN TWENTY-FOUR (24) HOURS OF A REQUEST BY THE DISTRICT TO CONDUCT A TEST.
13. PRIOR TO OPERATION, A <sup>3/4" NPT</sup> SAMPLE PORT <sup>WITH PLUG</sup> SHALL BE INSTALLED IN THE LANDFILL GAS HEADER ~~TO THE FLARE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE~~ <sup>AND TO</sup> ~~THE SAMPLE PORT SIZE AND LOCATION SHALL BE APPROVED BY THE EXECUTIVE OFFICER PRIOR TO INSTALLATION.~~ <sup>BETWEEN THE TOWERS AND</sup> <sup>ALLOW FOR FLOW MONITORING USING A PITOT TUBE.</sup>
14. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATIONS WITHIN THE FLARE AT ALL TIMES. PERMANENT AND SAFE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS.
15. THE MAXIMUM FLARE SHELL SKIN TEMPERATURE 4' BELOW AND ABOVE SAMPLE PORTS SHALL NOT EXCEED 250 DEGREES F ~~EXCEPT IN SMALL ISOLATED AREAS WHERE THERE IS NO INSULATION~~ <sup>EXCEPT IN SMALL ISOLATED AREAS WHERE THERE IS NO INSULATION</sup> SUPPORTS ARE IN CONTACT WITH THE FLARE WALL. ~~THESE AREAS SHALL NOT EXCEED 300 DEGREES F.~~
16. THE FLAME IN THE FLARE SHALL REMAIN BELOW THE HEIGHT OF THE FLARE'S OPERATING THERMOCOUPLE AT ALL TIMES.
17. ANY BREAKDOWN OR MALFUNCTION OF THE LANDFILL GAS FLARING SYSTEM RESULTING IN THE EMISSION OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD DIRECTOR OF ENFORCEMENT WITHIN ONE HOUR AFTER OCCURRENCE AND IMMEDIATE REMEDIAL MEASURE SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
18. WITHIN SIXTY (60) DAYS OF INITIAL OPERATION, THE APPLICANT <sup>(CALMANT)</sup> ~~(WATSON ENERGY SYSTEMS, INC.)~~ SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD TEST PROCEDURES AND FURNISH THE SCAQMD A WRITTEN RESULT OF SUCH PERFORMANCE TESTS WITHIN THIRTY (30) DAYS AFTER THE TESTS ARE CONDUCTED. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD SEVEN (7) DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL AT LEAST SIXTY (60) DAYS PRIOR TO THE START OF THE TESTS.



# South Coast AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9180 FLAIR DR., EL MONTE, CA 91731

Application Number:

~~165643~~ 164827

THE PERFORMANCE TESTS SHALL INCLUDE, BUT NOT BE LIMITED TO, A TEST OF THE INLET LANDFILL GAS TO THE FLARE AND THE FLARE EXHAUST FOR:

- A. METHANE
- B. TOTAL NON-METHANE ORGANICS
- C. OXIDES OF NITROGEN (EXHAUST ONLY)
- D. CARBON MONOXIDE (EXHAUST ONLY)
- E. PARTICULATES (EXHAUST ONLY)
- F. HYDROGEN SULFIDE (INLET ONLY)
- G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED) (INLET ONLY)
- H. CARBON DIOXIDE
- I. QUALITATIVE IDENTIFICATION OF CHEMICAL COMPOUNDS <sup>IDENTIFIED HERE</sup> USING A GAS CHROMATOGRAPHY/MASS SPECTROMETRY METHOD (GC/MS). QUANTITATIVELY ANALYZE EACH COMPOUND IDENTIFIED BY GC/MS FOR ITS VOLUME CONCENTRATION. TABLE 1 - CORE GROUP
- J. OXYGEN
- K. NITROGEN
- L. MOISTURE CONTENT
- M. FLOW RATE

AS AIR TOXIC CONTAMINANTS TO BE EVALUATED UNDER RULE 1150-1 AND INCLUDE HERE

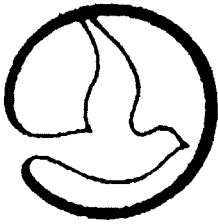
SEE NEXT PAGE

~~THE ABOVE TESTING SHALL BE CONDUCTED FOR LANDFILL GAS FROM SYSTEM NO. 9, THE MAIN SYSTEM AND COMBINATION OF SYSTEM NO. 9 AND THE MAIN SYSTEM.~~

- 19. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST TWO (2) YEARS AND MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
- 20. TRENCHING IN REFUSE SHALL NOT BE CONDUCTED ON DAYS WHEN THE SCAQMD FORECASTS SECOND OR THIRD STAGE EPISODES FOR AREA NUMBER ~~21~~ <sup>7</sup>. EPISODE FORECASTS FOR THE FOLLOWING DAY CAN BE OBTAINED BY CALLING (800) 445-3826 OR (800) 242-4666.
- 21. TRENCHING SHALL NOT BE CONDUCTED ON DAYS WHEN THE SCAQMD REQUIRES COMPANIES IN AREA NUMBER ~~21~~ <sup>7</sup> TO IMPLEMENT THEIR SECOND OR THIRD STAGE EPISODE PLANS. AREA NUMBERS REQUIRED TO IMPLEMENT THEIR EPISODE PLANS CAN BE DETERMINED FOR THE NEXT DAY BY CALLING (800) 445-3826 OR (800) 242-4666.
- 22. TRENCHING SHALL NOT BE CONDUCTED WHEN THE WIND SPEED IS GREATER THAN 15 MPH AVERAGE (OVER 15 MINUTES) OR THE WIND SPEED INSTANTANEOUSLY EXCEEDS 25 MPH.

INSERT AS PART OF "I"

- 1 Acetonitrile
- 2 Benzene
- 3 Benzyl Chloride
- 4 Chlorobenzene
- 5 Dichlorobenzene
- 6 1,1 Dichloroethane (Ethylidene Chloride)
- 7 1,2 Dichloroethene (Ethylene Dichloride)
- 8 1,1 Dichloroethene (Vinylidene Chloride)
- 9 Tetrachloroethylene (Perchloroethylene)
- 0 Tetrachloromethane (Carbon Tetrachloride)
- 1 Toluene
- 2 1,1,1 Trichloroethane (Methyl Chloroform)
- 3 Trichloroethylene
- 4 Trichloromethane (Chloroform)
- 5 Vinyl Chloride
- 6 Xylene
- 7 Methylene Chloride



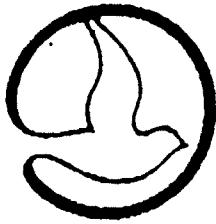
South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9180 FLAIR DR., EL MONTE, CA 91731

Application Number:

~~105641~~ 164827

23. CONSTRUCTION SPOILS ARE LANDFILL TRASH, MATERIAL THAT IS MIXED WITH LANDFILL TRASH, MATERIAL THAT HAS BEEN IN CONTACT WITH LANDFILL TRASH, OR ODOROUS MATERIAL THAT IS REMOVED FROM WELL HOLES OR GAS TRANSMISSION LINE TRENCHES.
24. DURING CONSTRUCTION, ALL WORKING AREAS, DRILLING SPOILS AND UNPAVED ROADWAYS SHALL BE WATERED DOWN UNTIL THE SURFACE IS MOIST AND THEN MAINTAINED IN A MOIST CONDITION TO MINIMIZE DUST.
25. ALL CONSTRUCTION SPOILS SHALL BE TRANSPORTED TO THE DISPOSAL AREA WITHIN ONE HOUR OF GENERATION OR AS DEEMED NECESSARY BY DISTRICT PERSONNEL.
26. ALL CONSTRUCTION SPOILS SHALL BE COMPLETELY COVERED WITH CLEAN DIRT WITHIN TEN MINUTES AFTER BEING DEPOSITED AT THE DISPOSAL AREA OR AS DEEMED NECESSARY BY DISTRICT PERSONNEL.
27. DURING TRANSPORT OF THE CONSTRUCTION SPOILS, NO MATERIAL SHALL EXTEND ABOVE THE SIDES OR REAR OF THE VEHICLE HAULING THE MATERIAL.
28. DURING CONSTRUCTION, IF A CONSIDERABLE NUMBER OF COMPLAINTS ARE RECEIVED, ALL WORK SHALL CEASE AND APPROVED MITIGATION MEASURES IMPLEMENTED IMMEDIATELY.
29. THE EXTERIOR OF THE VEHICLES HAULING THE CONSTRUCTION SPOILS TO THE WORKING FACE SHALL BE CLEANED OFF PRIOR TO LEAVING THE WORKING SITE FOR THE DESIGNATED DISPOSAL SITE.
30. IF A DISTINCT ODOR (LEVEL III OR GREATER) RESULTING FROM THE CONSTRUCTION IS DETECTED OFF-SITE, THE FOLLOWING MITIGATION MEASURES SHALL BE IMPLEMENTED IMMEDIATELY UPON REQUEST AND SHALL REMAIN IN EFFECT UNTIL DISTRICT PERSONNEL DETERMINES OTHERWISE:
  - A. <sup>REFUSE EXCAVATIONS</sup> ALL ~~DRILLING AND TRENCHING~~ SHALL CEASE.
  - B. ALL TRENCHES WHICH HAVE EXPOSED LANDFILL MATERIAL SHALL BE COVERED TO PREVENT ANY EMISSIONS INTO THE ATMOSPHERE.
  - C. ALL CONSTRUCTION SPOILS SHALL BE HAULED TO THE DESIGNATED DISPOSAL AREA AND ADEQUATELY COVERED SO AS TO PREVENT ANY EMISSIONS INTO THE ATMOSPHERE.



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9130 FLAMINGO BLVD., ALHAMBRA, CA 91701

Application Number:

~~165641~~ 164827

PRIOR TO RECOMMENCING WORK, ADDITIONAL MITIGATION MEASURES SHALL BE IMPLEMENTED. THESE MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- A. CONSTRUCTION SPOILS BEING REMOVED TO THE DISPOSAL AREA WITHIN FIFTEEN (15) MINUTES OF BEING GENERATED.
  - B. THE USE OF FOAM OR CLEAN DIRT TO IMMEDIATELY COVER THE CONSTRUCTION SPOILS AT THE WORKING SITE(s) AND DISPOSAL SITE.
31. MITIGATION MEASURES, OTHER THAN THOSE INDICATED IN THESE CONDITIONS, WHICH ARE DEEMED APPROPRIATE BY SCAQMD PERSONNEL AS NECESSARY TO PROTECT THE COMFORT, REPOSE, HEALTH OR SAFETY OF THE PUBLIC, SHALL BE IMPLEMENTED UPON REQUEST.

Approval or denial of this application for permit to operate the above equipment will be made after an inspection to determine if the equipment has been constructed in accordance with the approved plans and specifications and if the equipment can be operated in compliance with all Rules of the South Coast Air Quality Management District.

FRANK TAVAKOLI

6228

Please notify ~~8-11111~~ at 818/572-~~6100~~ when construction of equipment is complete.

This Authority to Construct is based on the plans, specifications, and data submitted as it pertains to the release of air contaminants and control measures or reduce air contaminants. No approval or opinion concerning safety and other factors in design, construction or operation of the equipment is expressed or implied.



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9190 FLAIR DR., EL MONTE, CA 91731

Application Number:


~~16364~~ 164827

This Permit to Construct shall serve as a temporary Permit to Operate provided the Executive Officer is given prior notice of such intent to operate.

---

This Permit to Construct will become invalid if the Permit to Operate is denied or if this application is cancelled. THIS PERMIT TO CONSTRUCT SHALL EXPIRE TWO YEARS FROM THE DATE OF FILING OF APPLICATION unless an extension is granted by the Executive Officer.

By

  
RAQUEL M. PUERTA

Principal Office Assistant

RMP/jas



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9160 FLAIR DR., EL MONTE, CA 91731

Application Number:  
164827  
I.D. NO. 3530

PERMIT TO CONSTRUCT

Granted as of July 10, 1989

Legal Owner            CALMAT PROPERTIES CO.  
or Operator            3200 SAN FERNANDO RD.  
                          LOS ANGELES, CA. 90065  
                          Attn: R. PROSSER

Equipment Location: 7245 LAUREL CANYON, LOS ANGELES, CALIFORNIA

The equipment described below and as shown on the approved plans and specifications are subject to the special condition, or conditions listed.

Equipment Description

ALTERATION OF THE EXISTING LANDFILL GAS COLLECTION AND FLARING SYSTEM COVERED UNDER APPLICATION NO. 133570 CONSISTING OF:

1. FLARE, 12'-0" DIA. X 14'-6" H., WITH A FOUR FOOT INNER SHROUD EXTENSION AND A PROPANE GAS PILOT BURNER.
2. EXHAUST SYSTEM WITH A 50 H.P. BLOWER AND A 50 H.P. STANDBY BLOWER VENTING 40 COLLECTION WELLS.
3. FORTY-FIVE (45) COMBINATION PROBES/GAS MIGRATION CONTROL WELLS VENTED TO THE EXHAUST SYSTEM.

BY THE ADDITION OF:

1. FLARE, JOHN ZINK, MODEL ZTOF, 8'-0" DIA. X 24'-0" H., 20,000,000 BTU/HR., WITH AN AUTOMATIC SHUTOFF VALVE FOR LANDFILL GAS INLET, FLAME ARRESTOR, UV SCANNER, AND TWO AUTOMATIC TEMPERATURE CONTROLLED AIR DAMPERS.
2. AUTOMATIC IGNITION SYSTEM WITH PROPANE PILOT ASSEMBLY AND AN IGNITION TRANSFORMER, ~~AND TWO (2) FIVE GALLON PROPANE TANKS V-2A AND V-2B.~~
- ~~3. CONDENSATE SUMP V-3, 2'-0" DIA. X 6'-0" L., FIBERGLASS.~~



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 2130 FLAIR DR., CL MONTE, CA 91731

Application Number:  
164827

I.D. NO. 3530

- ~~4. TWO (2) INLET SEPARATORS V-1A AND V-1B, EACH 3'-0" DIA. X 10'-0" L., FIBERGLASS, WITH TWO (2) PNEUMATIC LIQUID PUMPS P-1A AND P-1B, MARCH, MODEL AC-4C-MC-AM, 16 GPM EACH.~~
- ~~5. PLANT AIR COMPRESSOR C-1.~~
- ~~6. TWO (2) LANDFILL GAS BLOWERS B-1A AND B-1B, RAUCK, MODEL NO. 1BGB-9-071-271, EACH WITH A 25 H.P. MOTOR, VENTING FORTY-FIVE (45) MIGRATION CONTROL WELLS.~~

AND BY THE CONVERSION TO STANDBY OF THE EXISTING:

1. FLARE, 12'-0" DIA. X 14'-6" H., WITH A FOUR FOOT INNER SHROUD EXTENSION AND A PROPANE GAS PILOT BURNER.
- ~~2. EXHAUST SYSTEM WITH TWO (2) 50 H.P. BLOWERS VENTING 40 COLLECTION WELLS.~~

Conditions

1. CONSTRUCTION AND OPERATION OF THIS EQUIPMENT MUST BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT TO CONSTRUCT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT MUST BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL BE OPERATED AND MAINTAINED BY PERSONNEL PROPERLY TRAINED IN ITS OPERATION.
4. ALL LANDFILL GAS COLLECTED SHALL BE DIRECTED TO THE FLARE FOR COMBUSTION.
5. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A TEMPERATURE INDICATOR AND RECORDER WHICH MEASURES AND RECORDS THE GAS TEMPERATURE IN THE FLARE STACK. THE TEMPERATURE INDICATOR AND RECORDER SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION. THE TEMPERATURE SHALL BE RECORDED AT AN ELEVATION OVER THE TOP OF THE FLAME BUT NOT LESS THAN FOUR (4) FEET FROM THE TOP OF THE STACK.



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS. 1150 FLAIR DRIVE, EL MONTE, CA 91731

Application Number:  
164827  
I.D. NO. 3530

6. WHENEVER THE FLARE IS IN OPERATION, A TEMPERATURE OF NOT LESS THAN 1400 DEGREES F. SHALL BE MAINTAINED IN THE FLARE STACK AS MEASURED BY THE TEMPERATURE INDICATOR AND RECORDER. THE THERMOCOUPLE USED TO MEASURE THE TEMPERATURE SHALL BE ABOVE THE FLAME ZONE AND AT LEAST 0.6 SECONDS DOWNSTREAM OF THE BURNER. SUPPLEMENTAL FUEL MUST BE PROVIDED TO THE FLARE WHEN NECESSARY TO MAINTAIN 1400 DEGREES F. IN THE FLARE STACK.
7. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A FAILURE ALARM WITH AN AUTOMATIC SYSTEM, WHICH HAS BEEN APPROVED BY THE EXECUTIVE OFFICER, TO ISOLATE THE FLARE FROM THE LANDFILL GAS SUPPLY LINE, SHUT OFF THE BLOWER AND NOTIFY A RESPONSIBLE PARTY OF THE SHUTDOWN.
8. THE SAFETY SYSTEM SPECIFIED IN CONDITION NO. 7 SHALL BE TESTED MONTHLY FOR PROPER OPERATION AND THE RESULTS RECORDED.
9. PRIOR TO OPERATING THIS EQUIPMENT, A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE FLARE TO MEASURE (IN SCFM) AND RECORD THE QUANTITY OF LANDFILL GAS BEING BURNED IN THE FLARE. THIS FLOW INDICATING AND RECORDING DEVICE SHALL OPERATE WHENEVER THE FLARE IS IN OPERATION.
10. THE TOTAL VOLUME OF LANDFILL GAS BURNED IN THE FLARE SHALL NOT EXCEED 1500 SCFM.
11. ALL RECORDING DEVICES SHALL BE SYNCHRONIZED WITH RESPECT TO TIME OF DAY.
12. PRIOR TO OPERATION, FOUR SAMPLING PORTS SHALL BE PROVIDED IN THE FLARE STACK AT LEAST FOUR (4) FEET UPSTREAM OF THE FLARE OUTLET AND 90 DEGREES APART. EACH SAMPLING PORT SHALL CONSIST OF A FOUR (4) INCH COUPLING WITH PLUG. AN EQUIVALENT METHOD OF EMISSION SAMPLING MAY BE USED UPON APPROVAL BY THE EXECUTIVE OFFICER. ADEQUATE AND SAFE ACCESS TO ALL SOURCE TEST PORTS SHALL BE PROVIDED BY THE APPLICANT WITHIN TWENTY-FOUR (24) HOURS OF A REQUEST BY THE DISTRICT TO CONDUCT A TEST. *IS IT ABSOLUTELY MANDATORY TO HAVE 4 - WHY NOT 2*
13. PRIOR TO OPERATION, A 3/4" NPT SAMPLE PORT WITH PLUG SHALL BE INSTALLED IN THE LANDFILL GAS HEADER BETWEEN THE BLOWERS, AND THE FLARE TO ALLOW THE COLLECTION OF A LANDFILL GAS SAMPLE, AND TO ALLOW FOR FLOW MONITORING USING A PILOT TUBE.
14. PRIOR TO OPERATION, THE FLARE SHALL BE EQUIPPED WITH A SUFFICIENT NUMBER OF VIEW PORTS TO ALLOW VISUAL INSPECTION OF THE FLAME HEIGHT AT THE ELEVATION OF THE TEMPERATURE SENSOR LOCATIONS WITHIN THE FLARE AT ALL TIMES. PERMANENT AND SAFE ACCESS SHALL BE PROVIDED FOR ALL VIEW PORTS.



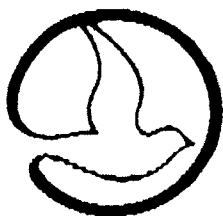
# South Coast AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 2150 FLAIR DR., EL MONTE, CA 91731

Application Number:  
164827

I.D. NO. 3530

15. THE MAXIMUM FLARE SHELL SKIN TEMPERATURE FOUR (4) FEET BELOW AND ABOVE SAMPLE PORTS SHALL NOT EXCEED 250 DEGREES F., EXCEPT IN SMALL ISOLATED AREAS WHERE INTERNAL METAL INSULATION SUPPORTS ARE IN CONTACT WITH THE FLARE WALL. THESE AREAS SHALL NOT EXCEED 300 DEGREES F.
  16. THE FLAME IN THE FLARE SHALL REMAIN BELOW THE HEIGHT OF THE FLARE'S OPERATING THERMOCOUPLE AT ALL TIMES.
  17. ANY BREAKDOWN OR MALFUNCTION OF THE LANDFILL GAS FLARING SYSTEM RESULTING IN THE EMISSION OF RAW LANDFILL GAS SHALL BE REPORTED TO THE SCAQMD DIRECTOR OF ENFORCEMENT WITHIN ONE HOUR AFTER OCCURRENCE AND IMMEDIATE REMEDIAL MEASURES SHALL BE UNDERTAKEN TO CORRECT THE PROBLEM AND PREVENT FURTHER EMISSIONS INTO THE ATMOSPHERE.
  18. WITHIN SIXTY (60) DAYS OF INITIAL OPERATION, THE APPLICANT (CALMAT) SHALL CONDUCT PERFORMANCE TESTS IN ACCORDANCE WITH SCAQMD TEST PROCEDURES AND FURNISH THE SCAQMD A WRITTEN RESULT OF SUCH PERFORMANCE TESTS WITHIN THIRTY (30) DAYS AFTER THE TESTS ARE CONDUCTED. WRITTEN NOTICE OF THE PERFORMANCE TESTS SHALL BE PROVIDED TO THE SCAQMD SEVEN (7) DAYS PRIOR TO THE TESTS SO THAT AN OBSERVER MAY BE PRESENT. ALL SOURCE TESTING AND ANALYTICAL METHODS SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL AT LEAST FORTY-FIVE (45) DAYS PRIOR TO THE START OF THE TESTS.
- THE PERFORMANCE TESTS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO A TEST OF THE INLET LANDFILL GAS TO THE FLARE AND THE FLARE EXHAUST FOR:
- A. METHANE
  - B. TOTAL NON-METHANE ORGANICS
  - C. OXIDES OF NITROGEN (EXHAUST ONLY)
  - D. CARBON MONOXIDE (EXHAUST ONLY)
  - E. PARTICULATES (EXHAUST ONLY)
  - F. HYDROGEN SULFIDE (INLET ONLY)
  - G. C1 THROUGH C3 SULFUR COMPOUNDS (SPECIATED, INLET ONLY)
  - H. CARBON DIOXIDE
  - I. QUALITATIVE IDENTIFICATION OF CHEMICAL COMPOUNDS IDENTIFIED USING A GAS CHROMATOGRAPHY/MASS SPECTROMETRY METHOD (GC/MS).  
QUANTITATIVELY ANALYZE THE FOLLOWING COMPOUNDS IDENTIFIED BY GC/MS FOR ITS VOLUME CONCENTRATION
1. BENZENE
  2. CHLOROBENZENE
  3. DICHLOROBENZENE
  4. 1,2 DICHLOROETHANE (ETHYLENE DICHLORIDE)
  5. 1,1 DICHLOROETHENE (VINYLIDENE CHLORIDE)



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 8130 FLAIR DR. EL MONTE, CA 91731

Application Number:

164827

I.D. NO. 3530

6. TETRACHLOROETHYLENE (PERCHLOROETHYLENE)
  7. TETRACHLOROMETHANE (CARBON TETRACHLORIDE)
  8. TOLUENE
  9. 1,1,1 TRICHLOROETHANE (METHYL CHLOROFORM)
  10. TRICHLOROETHYLENE
  11. TRICHLOROMETHANE (CHLOROFORM)
  12. VINYL CHLORIDE
  13. XYLENE
  14. METHYLENE CHLORIDE
  - J. OXYGEN
  - K. NITROGEN
  - L. MOISTURE CONTENT
  - M. FLOW RATE
  - N. TEMPERATURE
19. THE PRIMARY FLARE AND THE STANDBY FLARE SHALL NOT BE OPERATED SIMULTANEOUSLY.
20. ALL RECORDS SHALL BE KEPT FOR A PERIOD OF AT LEAST TWO (2) YEARS AND MADE AVAILABLE TO THE EXECUTIVE OFFICER UPON REQUEST.
21. THE EMISSIONS OF AIR POLLUTANTS SHALL NOT EXCEED THE FOLLOWING:
- |               |             |
|---------------|-------------|
| ROG:          | 2.0 LBS/HR. |
| NOx:          | 1.2 LBS/HR. |
| CO:           | 4.0 LBS/HR. |
| PARTICULATES: | 3.6 LBS/HR. |

Approval or denial of this application for permit to operate the above equipment will be made after an inspection to determine if the equipment has been constructed in accordance with the approved plans and specifications and if the equipment can be operated in compliance with all Rules of the South Coast Air Quality Management District.

Please notify R. GOTTSCHALK at 818/572-6203 when construction of equipment is complete.

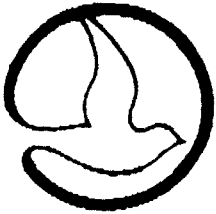
This Authority to Construct is based on the plans, specifications, and data submitted as it pertains to the release of air contaminants and control measures or reduce air contaminants. No approval or opinion concerning safety and other factors in design, construction or operation of the equipment is expressed or implied.

07/14/89

10:30

CALMATED

007



South Coast  
AIR QUALITY MANAGEMENT DISTRICT

HEADQUARTERS, 9150 CLARE DR., EL MONTE, CA 91731

Application Number:


164827

I.D. NO. 3530

This Permit to Construct shall serve as a temporary Permit to Operate provided the Executive Officer is given prior notice of such intent to operate.

This Permit to Construct will become invalid if the Permit to Operate is denied or if this application is cancelled. THIS PERMIT TO CONSTRUCT SHALL EXPIRE TWO YEARS FROM THE DATE OF FILING OF APPLICATION unless an extension is granted by the Executive Officer.

By

  
RAQUEL M. PUERTA  
Principal Office Assistant

RMP/jas



## INTER OFFICE MEMORANDUM

TO Tom Linden DATE 3/14/89

SUBJECT Methane Gas

FROM George Cosby File Ref.

---

This project was presented in the 1989 Budget. A methane gas flare is needed to increase the temperature inside the flare to comply with standards set by the South Coast Air Quality Management District. Currently we are out of compliance. A new permit application for this flare has been approved by the District. The breakdown of costs are as follows:

Flare Manufacturing	\$42,000.00
Concrete Pad & Grading	8,000.00
Electrical	10,000.00
Sumps	12,000.00
Tanks	15,000.00
<hr/>	
Total	\$87,000.00

/oc





Air Measurement Services

(805) 498-8781

CO1-001-FR

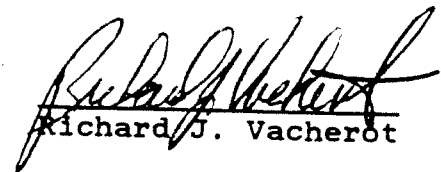
EMISSIONS FROM A  
LANDFILL GAS COLLECTION SYSTEM FLARE,  
HEWITT LANDFILL

Prepared for:

CAL MAT PROPERTIES COMPANY  
3200 San Fernando Road  
Los Angeles, CA 90065

Prepared by:

HORIZON AIR MEASUREMENT SERVICES  
996 Lawrence Drive #117  
Newbury Park, CA 91320



Richard J. Vacherot

# HORIZON

Air Measurement Services

(805) 498-8781

May 29, 1990

Mr. George Cosby  
Cal Mat Properties Company  
3200 San Fernando Road  
Los Angeles, California 90065

Dear Mr. Cosby:

Please find enclosed two copies of the report entitled, "Emissions from a Landfill Gas Collection System Flare, Hewitt Landfill" documenting the emissions testing program conducted at the Hewitt Landfill Flare on April 26 and 27, 1990.

Sincerely,

HORIZON AIR MEASUREMENT SERVICES



Richard J. Vacherot

RV:lmg

Enclosure

## TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION	1
2. RESULTS	3
3. SAMPLING/ANALYTICAL PROTOCOLS	7
3.1 Sampling Location	7
3.1.1 Landfill Gas - Flare Inlet	7
3.1.2 Flare Outlet	8
3.2 Particulate Matter, Flow Rate, Moisture, Temperature	8
3.3 Sampling Procedures for Continuous Monitors - NO <sub>x</sub> , O <sub>2</sub> , CO and CO <sub>2</sub>	10
3.4 Methane/Total Non Methane Organics, Carbon Monoxide, and Carbon Dioxide - Flare Inlet	11
3.5 Methane and Total Non Methane Organics - Flare Outlet	12
3.6 Speciated Hydrocarbons, Hydrogen Sulfide (H <sub>2</sub> S) and C <sub>1</sub> - C <sub>3</sub> Sulfur Compounds	12
4. QUALITY CONTROL/QUALITY ASSURANCE	16
4.1 Equipment Calibration	16
4.2 Field Custody Procedures	17
4.3 Laboratory Custody Procedures	17
4.5 QA Objectives for Precision, Accuracy and Completeness	18
4.6 Data Validation	18
4.6.1 Field Data	18
4.6.2 Laboratory Data	19
4.7 Internal Quality Control Checks	19
APPENDIX A COMPUTER PRINTOUT OF RESULTS	
APPENDIX B LABORATORY DATA	
APPENDIX C FIELD DATA SHEETS	
APPENDIX D CALIBRATIONS	
APPENDIX E CHAIN-OF-CUSTODY RECORDS	

## 1. INTRODUCTION

Under Permit to Construct #164827 CAL MAT PROPERTIES COMPANY is required by the South Coast Air Quality Management District (SCAQMD) to conduct an emissions testing program on the landfill gas collection system flare located at the Hewitt Landfill, Los Angeles, California. HORIZON AIR MEASUREMENT SERVICES had been retained for this purpose. Field testing was conducted by Richard Vacherot, Robert Halk and Steve Mrazek of HORIZON. Continuous emission monitoring was conducted by Russ Logan of SCE.

The flare and landfill gas collection system description and specifications are provided in Table 1-1.

Results of the testing program are reported in Section 2 of this document. Sampling/Analytical procedures are provided in Section 3. Quality Control/Quality Assurance procedures utilized are provided in Section 4. All pertinent documentation is contained in the Appendices.

TABLE 1-1

Flare/Landfill Gas Collection System  
Description and Specifications  
Permit to Construct #164827

Legal Owners: CAL MAT PROPERTIES COMPANY  
3200 San Fernando Road  
Los Angeles, CA 90065  
Attn: R. Prosser

Equipment Location: 7245 Laurel Canyon  
Los Angeles, CA

Landfill Gas Collection System: Two landfill gas blowers B-1A and B-1B, Hauch, Model No. TBGB-9-071-271, each with a 25 Hp motor, venting forty-five (45) migration control wells.

Flare: John Zink, Model ZTOF, 8'-0" diameter x 24'-0" H, 20,000,000 Btu/hr.

Test Operating Conditions: Normal flare operating conditions - 1550° F.

## 2. RESULTS

The results of the criteria pollutant testing at the flare outlet are provided in Table 2-1. All emission rates were below the allowable limit.

Two test runs were performed for particulate matter. Upon preparation for analysis of particulate matter run #1, it was noticed that insulation material from the flare lining had inadvertently been collected in the sampling train impinger catch. Therefore, this test run was deemed unrepresentative and, although analyzed, the result from test run #1 is not reported in Table 2-1.

Results of the flare inlet and outlet testing using SCAQMD Method 25.1 and Method 25.2 TCA analyses, respectively, are reported in Table 2-2. Reported values are the average of duplicate samples. Duplicate total non methane hydrocarbon sample concentrations were within either 10% (inlet) or .5 ppm (outlet) of the reported average.

Speciated hydrocarbon and sulfur compound inlet and outlet concentrations are reported in Table 2-3.

TABLE 2-1  
Criteria Pollutant Emission Testing Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Concentration</u> (ppm,v/v)	<u>Emission Rate</u> (lb/hr)	<u>Allowable</u> (lb/hr)
Oxides of Nitrogen, as NO <sub>2</sub>	6.5	0.57	1.2
Carbon Monoxide, as CO	4.7	0.25	4.0
Reactive Organic Carbon, as CH <sub>4</sub>	1.16	0.035	2.0
Particulate Matter	0.013(gr/dscf)	1.3 <sup>a</sup>	3.6

a Based on Run #2 results. Run #1 was invalidated due to the inadvertent collection of flare insulation material in the sample train. Run #1 resulted in an emission rate of 3.55 lb/hr.

TABLE 2-2  
Total Combustion Analyses Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Inlet<sup>1</sup></u> (ppm,v/v)	<u>Outlet<sup>1</sup></u> ppm (v/v)	<u>lb/hr</u>
Total Non Methane Hydrocarbons	1,724	1.16	0.035
Methane	201,000	2.79	NA
Carbon Monoxide	100.8	NQ	NA
Carbon Dioxide	205,500	NQ	NA

1 All reported values are the average of duplicate samples.

NQ - Not Quantified

NA - Not Applicable

TABLE 2-3  
Speciated Hydrocarbon and Sulfur Compound Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Inlet<sup>1</sup></u> (ppb, v/v)	<u>Outlet<sup>1</sup></u> (ppb, v/v)
Hydrogen sulfide	21,500	NQ
C1-C3 sulfur compounds <sup>2</sup>	<400	NQ
Vinyl chloride	570	<7.9
1,1-dichloroethane	<51	<5.1
Methylene chloride	<58	<5.8
Chloroform	<41	<4.1
1,2 dichloroethane	<50	<5.0
1,1,1-trichloroethane	<37	<3.7
Benzene	2,800	<6.3
Carbon tetrachloride	<32	<3.2
Trichloroethene	250	<3.7
Toluene	4,900	20
Tetrachloroethane	335	<3.0
Chlorobenzene	490	<4.4
Total xylenes	7,350	6.6
1,4 dichlorobenzene	450	<3.3

1. Reported values are the average of duplicate analyses. Concentrations preceded by "<" are below the detection limit reported.

2. Includes methylmercaptan, ethylmercaptan, propyl mercaptan, dimethyl sulfide and CS<sub>2</sub>.

NQ - Not quantified.

### 3. SAMPLING/ANALYTICAL PROTOCOLS

The parameters of interest and associated sampling/analytical methodology utilized, as required by Permit Condition #18, are outlined below:

<u>Parameter</u>	<u>Test Method</u>
Methane/Total Non Methane Organics	SCAQMD Method 25.1
Oxides of Nitrogen (Exhaust Only)	SCAQMD Method 100
Carbon Monoxide (Exhaust Only)	SCAQMD Method 100
Particulates (Exhaust Only)	SCAQMD Method 5.1
Hydrogen Sulfide (Inlet Only)	Whole Air/GC-Hall detection
C <sub>1</sub> - C <sub>3</sub> Sulfur Compounds (Inlet Only)	Whole Air/GC-Hall detection
Speciated Hydrocarbons	Whole Air/GC-MS
Carbon Dioxide	SCAQMD Method 100/25.1
Oxygen	SCAQMD Method 100
Nitrogen (Exhaust Only)	SCAQMD Method 100
Moisture Content (Exhaust Only)	SCAQMD Method 5.1
Flow Rate (Exhaust Only)	SCAQMD Method 5.1
Temperature (Exhaust Only)	SCAQMD Method 5.1

One, one-hour test run for each parameter was conducted simultaneously at the specified locations with the exception of particulate matter. Two, three-hour particulate test runs were conducted. The sampling locations and specific sampling/analytical procedures utilized are detailed in subsequent portions of this Section.

#### 3.1 Sampling Location

##### 3.1.1 Landfill Gas - Flare Inlet

Flare inlet samples were collected from a 3/4" NPT sample port installed in the landfill gas header between the blowers and the flare.

### 3.1.2 Flare Outlet

Flare outlet samples were collected from a location five feet downstream from the top of the flare stack and 19 feet above the flare stack base.

### 3.2 Particulate Matter, Flow Rate, Moisture, Temperature

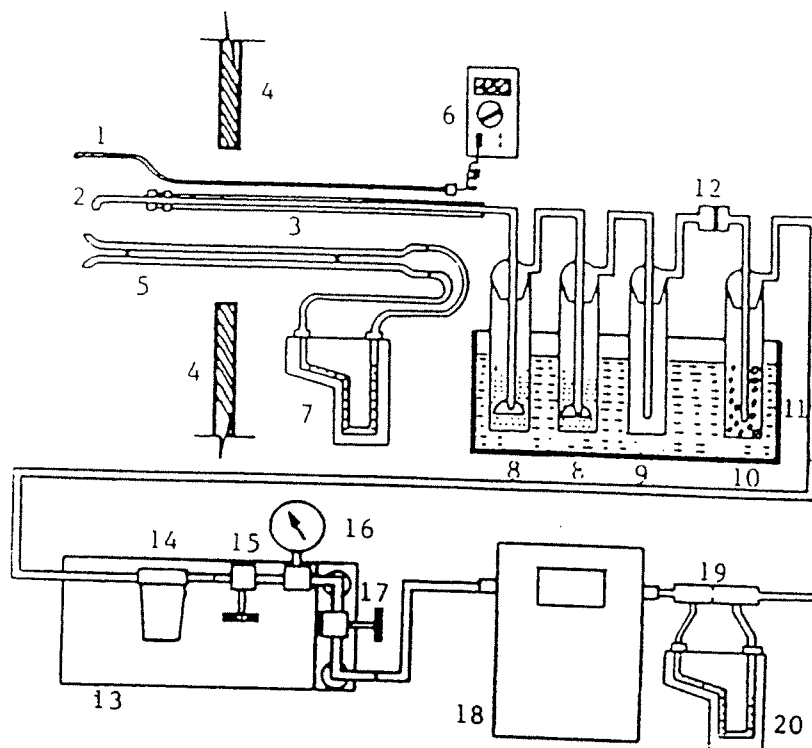
HORIZON conducted two test runs for particulate matter in accordance with SCAQMD Method 5.1 protocol.

Twelve points per each of two traverses were utilized for the collection of particulate matter. A check for cyclonic flow was conducted at the sample locations concurrent with the preliminary velocity traverse as specified in the method. Samples were withdrawn isokinetically from each of the determined traverse points.

HORIZON used a sampling train which conforms to Method 5.1 specifications as depicted in Figure 3-1. Stack gases were withdrawn through a Hastalloy C buttonhook nozzle and a Hastalloy C unheated probe followed by 3/8" OD Teflon tubing and a series of four impingers. A thermocouple and pitot tube were connected to the probe per Method 5.

The third and fourth impinger was of the modified Greenburgh-Smith design, and the first and second was a standard type. The first and second impinger contained 100 ml of DI H<sub>2</sub>O. The third impinger was empty. The last contained a preweighed amount of silica gel. An umbilical cord connected the last impinger to the flow control console containing a leakless, lubricated vane pump, dry gas meter, calibrated orifice, and a dual 0-0.25 inch H<sub>2</sub>O magnahelic.

A leak check of the pitot tube lines and sampling trains was conducted prior to and after each sampling run and prior to and after either changing any of the constituents of the train or



- |  |   |
|--|---|
| 1. Temperature Sensor                    | 11. Ice Bath                              |
| 2. Nozzle                                | 12. Filter                                |
| 3. Glass Lined Stainless Steel Probe     | 13. Sealed Pump (Leak Free)               |
| 4. S-type Pitot Tube                     | 14. Filter for Pump                       |
| 5. Stack Wall                            | 15. Metering Valve                        |
| 6. Temperature Sensor Meter              | 16. Vacuum Gauge                          |
| 7. Pitot Tube Inclined Manometer         | 17. By-pass Valve                         |
| 8. Impinger with 100 ml H <sub>2</sub> O | 18. Temperature Compensated Dry Gas Meter |
| 9. Empty Bubbler                         | 19. Orifice                               |
| 10. Bubbler with Silica Gel              | 20. Orifice Inclined Manometer            |

Figure 3-1

Particulate Sampling Train Setup-Wet Impingement Method

disconnecting umbilical cords to facilitate transport of the trains.

Upon completion of each sampling run, the nozzle was removed. The nozzle, probe and connective tubing was brushed and rinsed with distilled water. The filter was replaced in its original container pending analyses. The impingers and all connecting glassware was collected and rinsed with DI water.

All sample bottles and filter containers were sealed with chain-of-custody tape and all liquid levels marked.

Analyses was conducted on the probe and impinger catch fraction and filter fraction in accordance with SCAQMD Method 5.1.

### 3.3 Sampling Procedures for Continuous Monitors - NO<sub>x</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>

One 60-minute test run was conducted at the flare outlet for NO<sub>x</sub>, CO, CO<sub>2</sub> and O<sub>2</sub> using SCAQMD Method 100.1 continuous monitoring procedures. Sample was extracted through a stainless steel probe followed by a Teflon sample line using a Teflon-lined diaphragm pump. Prior to the pump, the sample gas is passed through a glass water "drop out" container followed by a 47 mm glass fiber filter contained within a stainless steel holder. The clean, dry sample gas is then transported to the continuous analyzer system through an unheated 5/8" OD Teflon line. A series of flowmeters, valves, and regulators maintain flow through the system at a constant pressure.

Calibration of the continuous analyzers are performed using certified calibrations gases ( $\pm 1\%$ ) for criteria pollutant analysis and for fixed gas analysis. All pertinent data (date, time, test locations, analyzer range, cal gas value) are recorded on both the field data sheets and the continuous analyzer strip charts in the field.

At the start of the test day, a leak-check is performed. The sample probe is removed from the stack and the end is sealed with

a Swagelok cap. A leak-check is successfully only if pressure at the analyzer system and flow through the rotometers to the individual analyzers all drop to zero. A mandatory leak-check is performed at completion of each test day.

An external calibration (sampling system bias check) of the monitoring system is performed at the beginning and end of each test day by introducing a calibration gas at the tip of the probe. The value measured by the system must agree within  $\pm 5\%$  of the certified gas value before testing can proceed.

An internal calibration is performed at the start of each test period by introducing zero and the span gas to each analyzer and making the necessary adjustments. Calibration gas values are recorded onto the continuous monitor strip charts and the field data sheets. A calibration check is completed at the end of each test run.

#### 3.4 Methane/Total Non Methane Organics, Carbon Monoxide, and Carbon Dioxide - Flare Inlet

Methane, total non methane organics, carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) samples was collected by HORIZON AIR MEASUREMENT SERVICES using the SCAQMD Method 25.1 procedures at the flare inlet.

Duplicate gas samples are withdrawn from a source at a constant rate through condensate traps immersed in dry ice followed by evacuated, 12-liter (nominal) tanks. Heavy organic components condense as liquids and solids in the condensate traps. Lighter components pass as gases through the traps into the tanks. Volatile organic compounds (VOC) as total gaseous non-methane organics (TGNMO) are determined by combining results from independent analyses of condensate in the traps and gases in the tanks. These results are used to determine a qualitative and quantitative expression of the effluent source gas stream. Duplicate sampling is designed into the system to ensure precision.

After sampling is completed, condensate traps are analyzed by first stripping carbon dioxide ( $\text{CO}_2$ ) from the trap. The organic contents are then removed and oxidized to  $\text{CO}_2$ . This  $\text{CO}_2$  is quantitatively collected in an evacuated vessel and measured by injection into the flame ionization detection/total combustion analysis (FID/TCA) system.

The organic content of the sample fraction collected in each tank is measured by injecting a portion into the FID/TCA analysis system which uses a two phase gas chromatography (GC) column to separate carbon monoxide ( $\text{CO}$ ), methane ( $\text{CH}_4$ ), and carbon dioxide ( $\text{CO}_2$ ) from each other and from the total gaseous non-methane organics (TGNMO) which are eluted as backflush. All eluted components are first oxidized to  $\text{CO}_2$  by a hopcalite catalyst and then reduced to methane by a nickel catalyst. The resulting methane is detected using the flame ionization detector.

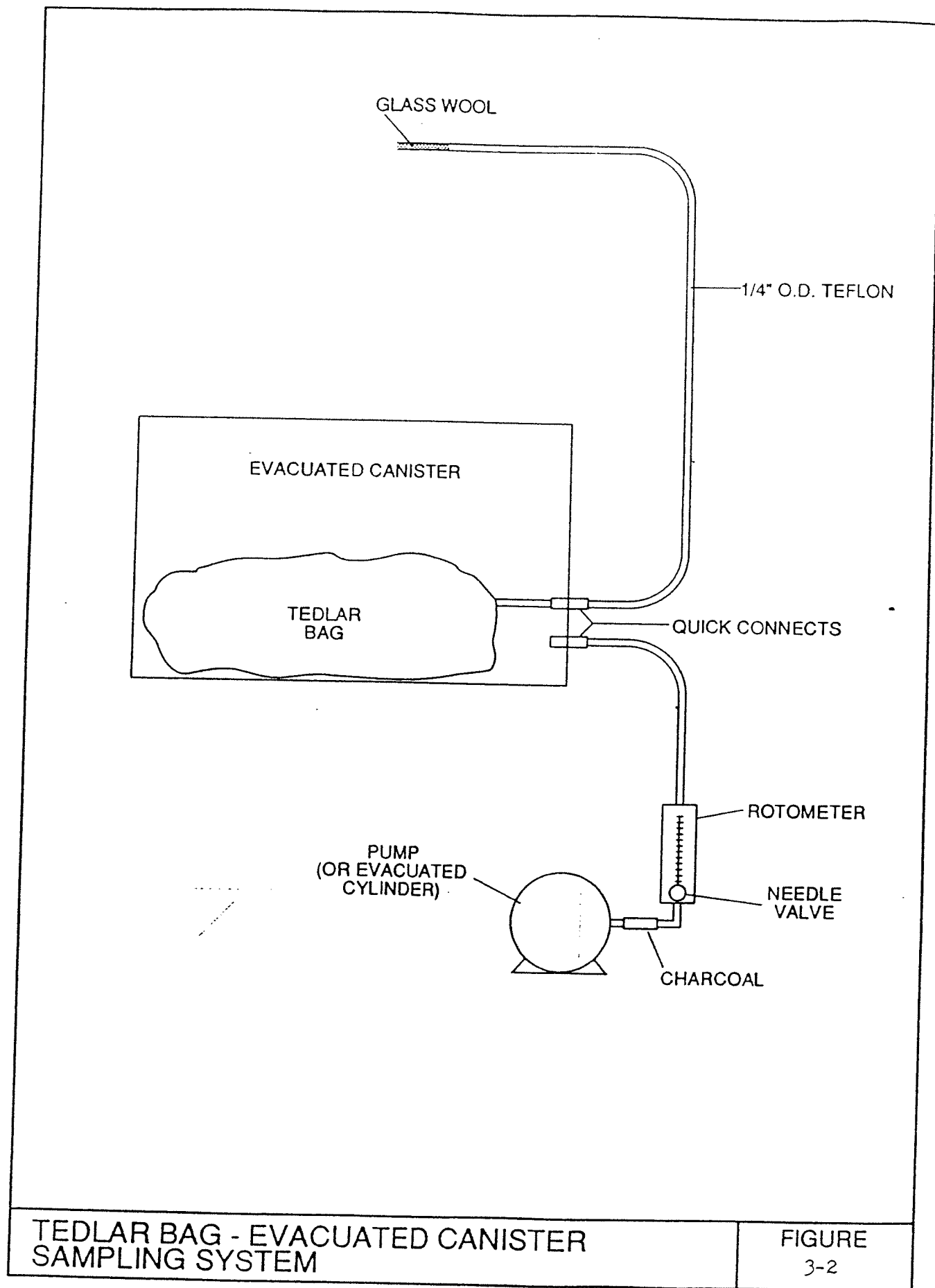
A gas standard containing  $\text{CO}$ ,  $\text{CH}_4$ ,  $\text{CO}_2$ , and propane, prepared by Scott Speciality Gases is traceable to NBS and is used to calibrate the FID/TCA analysis system.

### 3.5 Methane and Total Non Methane Organics - Flare Outlet

Methane and total non methane organics were collected at the flare outlet using SCAQMD Method 25.2 using the sampling procedure described in Section 3.6. Duplicate bag samples were analyzed using Micro - TCA procedures.

### 3.6 Speciated Hydrocarbons, Hydrogen Sulfide ( $\text{H}_2\text{S}$ ), and $\text{C}_1 - \text{C}_3$ Sulfur Compounds

Speciated hydrocarbon samples were collected at the inlet and outlet of the flare using the Tedlar bag collection system pictured in Figure 3-2. Hydrogen sulfide ( $\text{H}_2\text{S}$ ) and  $\text{C}_1 - \text{C}_3$  sulfur compounds were collected at the flare inlet only using identical procedures



TEDLAR BAG - EVACUATED CANISTER  
SAMPLING SYSTEM

as speciated hydrocarbons. One, 60-minute sample was collected simultaneously at the flare inlet and outlet.

The evacuated canister sampling system is capable of collecting an integrated, representative sample while ensuring sample integrity. The system consists of a 1/4" O.D. Teflon probe/sample line, containing glass wool to remove particulate, and a 10-liter leak-free, non-reactive Tedlar bag contained within an leak-free evacuation drum. All system components coming in contact with sample are constructed of Teflon, glass, or stainless steel.

Sample was collected by evacuating the canister at a constant rate over each test run using a rotometer/needle valve and a second 12-liter stainless steel cylinder evacuated to 30 inches of vacuum.

Prior to each sampling run, the evacuated canister (containing the Tedlar bag) was leak checked at 2" Hg vacuum. The sample train upstream of the Tedlar bag was then be purged with stack gas.

At the conclusion of each test run, each Tedlar bag sample was sealed and stored in an opaque container pending analysis.

All samples were analyzed within 48 hours of collection.

Speciated hydrocarbons were identified by GC/MS with the Table 3-1 list quantified. Hydrogen sulfide and C<sub>1</sub> - C<sub>3</sub> sulfur compounds were analyzed using Hall electrolytic conductivity detection.

TABLE 3-1

Speciated Hydrocarbons Quantification List

1. Benzene
2. Chlorobenzene
3. Dichlorobenzene
4. 1,2 Dichloroethane (Ethylene Dichloride)
5. 1,1 Dichloroethene (Vinylidene Chloride)
6. Tetrachloroethylene (Perchloroethylene)
7. Tetrachloromethane (Carbon Tetrachloride)
8. Toluene
9. 1,1,1 Trichloroethane (Methyl Chloroform)
10. Trichloroethylene
11. Trichloromethane (Chloroform)
12. Vinyl Chloride
13. Xylene
14. Methylene Chloride

#### 4. QUALITY CONTROL/QUALITY ASSURANCE

A strict quality assurance program was adhered to throughout the source sampling and analytical phases of the program.

The quality assurance program entails the calibration of all sampling and analytical apparatus where applicable and the use of control samples and replicate analyses where feasible.

##### 4.1 Equipment Calibration

The sampling equipment was calibrated at HORIZON's office before transport and recalibrated upon return. The sampling equipment was calibrated according to the EPA procedures specified in APTD-0576 and 40 CFR 60, Appendix A, and manufacturer's specifications. Calibration sheets were available prior to the initiation of the sampling program. Calibration procedures include:

- o Dry Gas Meter and Orifice Meter Method 5. The dry gas meters for all sampling trains were calibrated against a GCA/Precision wet test meter or a dry gas meter which has been calibrated against a spirometer. The orifice meters in the particulate trains were checked against the dry gas meter to which it is attached.
- o Sampling Nozzle. Each nozzle was measured with a micrometer prior to testing. The internal diameter of each sampling nozzle is measured to 0.001 inches along three points of the circumference with a dial vernier caliper. The three measurements were then averaged.
- o Balance. The analytical balance was calibrated against Class M weights by the Mettler Corporation. It is checked daily against Class S weights.
- o Thermocouples. The K-type thermocouples in the meter control box, heated sample box, impinger umbilical connector and the one attached to the probe are calibrated against ASTM mercury in glass thermometers at two points. The first point is in an ice bath and the second at the boiling point of water.
- o Pitot Tube. The "S" type Pitot tubes were designed to meet geometric configurations as defined in Method 2.

#### 4.2 Field Custody Procedures

In addition to identification labels or tags, chain of custody seals were used on samples collected by field personnel. These self-sticking seals were placed across the sample container cover/lid in such a way that the container cannot be opened without breaking the seal. The condition of the seal was noted in the Sample Bank Master Log to document whether any tampering had occurred after the sample was collected.

The chain of custody of a sample was initiated and maintained as follows:

- o A sample was collected, labeled, and sealed on appropriate samples.
- o The sample was recorded on the chain-of-custody record (COC).
- o All samples were accounted for, packed, and returned to the laboratory.

#### 4.3 Laboratory Custody Procedures

Upon return to the laboratory the samples and the COC record was turned over to the Sample Bank Manager (SBM) who:

- o Logged the sample into a large bound Master Log.
- o Noted the condition and the container type.
- o Assigned and affixed a Control Number to the sample container.
- o Initiated a page for each sample in the Custody Book and made sure that handling of the sample was documented.
- o After necessary preservation and/or subdivision, stored the samples in the refrigerated or non refrigerated section of the Sample Bank as appropriate.

All withdrawals from and returns to the Sample Bank were initiated by entry in the SAMPLE BANK TRANSACTION LOG BOOK.

#### 4.5 QA Objectives for Precision, Accuracy and Completeness

The collection of data that was used to successfully accomplish the goals outlined in this report required that the sampling and analytical procedures be conducted with properly operated and calibrated equipment by trained, experience personnel.

It is recognized that the usefulness of the data is contingent upon meeting criteria for representatives and comparability. Every effort was made to assure representatives by adhering strictly to the sampling and analytical protocols outlined. The QA objective is that all measurements be representative of the streams sampled and of the process being tested.

#### 4.6 Data Validation

Data validation is the process of filtering data and accepting or rejecting it on the basis of sound criteria. HORIZON supervisory and QC personnel used validation methods and criteria appropriate to the type of data and the purpose of the measurement. Records of all data were maintained, even that judged to be an "outlying" or spurious value. The persons validating the data have sufficient knowledge of the technical work to identify questionable values.

##### 4.6.1 Field Data

The following criteria was used to evaluate sampling data:

- o Use of approved test procedures.
- o Steady-state operation of the process being tested.
- o Use of properly operating and calibrated equipment.

- o Use of reagents that have passed QC checks.
- o Leak checks conducted before and after tests.
- o Proper chain of custody maintained.

#### 4.6.2 Laboratory Data

The following criteria was used to validate laboratory data:

- o Use of approved analytical procedure.
- o Use of properly operating and calibrated instrumentation.
- o Precision and accuracy achieved comparable to that achieved in similar analytical programs.

#### 4.7 Internal Quality Control Checks

Quality Control checks were performed to ensure the collection of representative samples by using the proper sampling techniques and the generation of valid analytical results on these samples. These checks were performed by project participants throughout the program under the guidance of the QA Task Manager and the Project Manager. HORIZON'S QC program from the sampling aspects of this program included the following:

- o Equipment Calibration - All sampling equipment (dry gas meters, pitot tubes, thermocouples, etc.) were calibrated as previously described in this QA Plan.
- o Use of Designated Sampling Forms - Sample data forms were developed for all methods and were completed by personnel collecting the sample to ensure that all pertinent information was recorded.

HORIZON quality control program for laboratory analysis made use of a number of different types of QC samples to document the validity of the generated data. The following types of QC samples were used routinely:

- o Blank Samples

1. Field-Biased Blanks - Blank samples which have been exposed to field and sampling conditions in order to assess possible contamination from the field.
2. Method Blanks - Blanks which are processed through the sample preparation procedures to account for contamination introduced in the laboratory. One method blank is prepared with each batch of 20 or fewer samples processed.
3. Calibration Blanks - Blanks used in instrument calibration; these blanks contain the reagents used in preparing instrument calibration standards except the parameters of interest.

- o Duplicate Samples - A second aliquot of some samples was carried through all sample preparation and analysis procedures to verify the precision of the analytical method.

The duplicate and spiked samples or reference materials were also submitted as "blind" QC samples, those which are not recognizable to the analyst.

- o Instrument QC Checks and Frequency

- daily calibration
- analyze a calibration check sample after every 10 samples; reported value must be within established control limits.

- o Preparation and Analysis Procedure QC Checks and Frequency

- method blank with each group of 20 or fewer samples
- laboratory control sample and duplicate with each group of 20 or fewer samples

Reagents used in the laboratory are normally of analytical grade or higher purity; each lot of acid or solvent used was checked for acceptability prior to lab use.

## APPENDIX A

### Computer Printout of Results

# CALMAT

LANDFILL FLARE  
PLANT: HEWITT LANDFILL  
LOCATION: NORTH HOLLYWOOD

RUN NUMBER	*****	RUN 1	RUN 2
DATE OF RUN	*****	4-26-90	4-27-90
CLOCK TIME: INITIAL	*****	1350	810
CLOCK TIME: FINAL	*****	1700	1126
AVG. STACK TEMPERATURE	DEGREES F	1251	1339
AVG. SQUARE DELTA P	INCHES H2O	0.1463	0.1424
NOZZLE DIAMETER	INCHES	0.365	0.365
BAROMETRIC PRESSURE	IN. HG.	30.02	30.03
SAMPLING TIME	MIN.	180	192
SAMPLE VOLUME	CUBIC FEET	30.200	30.688
AVG. METER TEMP.	DEGREES F	92	83
AVG. DELTA H	IN. H2O	0.09	0.09
DGM CALIB. FACTOR [Y]	*****	1.01	1.01
WATER COLLECTED	MILLITERS	61	53
CO 2	PERCENT	12.0	12.0
O 2	PERCENT	11.3	11.0
CO	PERCENT	0.0	0.0
N 2	PERCENT	76.7	77.0
STACK AREA	SQUARE INCHES	7238	7238
STATIC PRESSURE	INCHES WG.	-0.05	0.20
PITOT COEFFICIENT	*****	0.84	0.84
SAMPLE VOLUME DRY	DSCF	28.836	29.797
WATER AT STD.	SCF	2.9	2.5
MOISTURE	PERCENT	9.1	7.7
MOLE FRACTION DRY GAS	*****	0.909	0.923
MOLECULAR WT.DRY	LB/LB MOLE	30.37	30.36
EXCESS AIR	PERCENT	126.27	117.92
MOLECULAR WT. WET	LB/LB MOLE	29.24	29.41
STACK GAS PRESSURE	INCHES HG.	30.02	30.04
STACK VELOCITY	AFPM	879	875
VOLUMETRIC FLOWRATE, DRY STD.	DSCFM	12246	11785
VOLUMETRIC FLOWRATE, ACTUAL	ACFM	44192	43974
ISOKINETIC RATIO	PERCENT	90	91

## CALCULATIONS FOR GRAIN LOADING AND EMISSION RATES

TOTAL PARTICULATE	mg	63.3	25.1
PARTICULATE CONCENTRATION	gr/dscf	0.034	0.013
PARTICULATE EMISSION RATE	lb/hr	3.55	1.31

# HORIZON

Date: 4/26/90

Page 1 of 1

Emissions Data - S.C.A.Q.M.D. Method 100.1

Client : Calmat  
Site : Hewlitt Landfill

Unit : Flare  
Run # : 1

Times : Beg.Cal@ 1600 Start@ 1610 Stop@ 1710 End Cal@ 1710

\*\* MEASURED EMISSIONS COMPONENTS \*\*

Source :	Out	Out	Out	Out
Component:	NOx	O2	CO	CO2
Units :	ppm	%	ppm	%

\*\* INSTRUMENT CAL RANGE, SPAN & DATA RANGE \*\*

C. Range :	100	25	100	25
Span :	84.0	10.0	68.8	10.0
D. Range :	100	25	100	25

\*\* RAW EMISSIONS DATA \*\*

1610	7	9.8	15	9.5
5	6	10.5	5	10.0
10	7	10.2	0	10.0
15	6	10.4	16	10.0
20	6	10.2	0	11.5
25	6	10.0	0	10.5
30	7	10.2	6	9.5
35	7	10.5	0	9.7
40	5	10.2	4	10.0
45	6	10.0	6	10.0
50	6	10.2	6	10.0
55	7	10.7	1	10.2
60	8	10.5	2	10.0
Raw Avg. :	6	10.3	5	10.1
Maximum :	8	10.7	16	11.5
Minimum :	5	9.8	0	9.5

\*\* CALIBRATION ADJUSTMENTS \*\*

Zero :	1.0	0.0	1	0.0
Span :	-3.0	0.0	0	0.0

\*\* DRIFT CORRECTED EMISSIONS \*\*

Average :	7	10.3	5	10.1
-----------	---	------	---	------

\*\* NOTES \*\*

HORIZON

EMISSION RATES - TNMHC  
PLANT: HEWITT LANDFILL FLARE EXHAUST  
LOCATION: N. HOLLYWOOD  
TEST PROGRAM PARTICIPANTS: R. VACHEROT, S. MRAZEK, R. HALK

SAMPLE LOCATION: FLARE EXHAUST  
CONTAMINANT: VOC, CH4 16.00

RUN #		OUTLET	OUTLET
DATE		1A	1B
		4-26-90	4-26-90
SAMPLE VOLUME	standard liters		
CONTAMINANT MASS	ug		
CONCENTRATION	ug/liter	0.8566	0.6539
CONCENTRATION	ppm,v/v	1.31	1.00
VOLUMETRIC FLOWRATE	dscfm	12246	12246
EMISSION RATE	grams/second	4.95E-03	3.78E-03
EMISSION RATE	lbs/hour	3.92E-02	2.99E-02

---

HORIZON

CLIENT: CALMAT  
 JOB NUMBER: C01-001  
 SOURCE : FLARE  
 FACILITY: HEWITT LANDFILL  
 LOCATION: N. HOLLYWOOD  
 TEST DATE: 4-26-90

Parameter	Units	Inlet	Inlet
Tank #		F	G
Trap #		F	G
Sample Tank Vol.	liters	12.460	12.460
Initial Pressure	mm Hg	4.5	4.5
Initial Temperature	K	289	289
Final Pressure	mm Hg	240	225
Final Temperature	K	289	289
Sample Volume	liters	3.92	3.67
Analysis Pressure	mm Hg	800	800
Analysis Temperature	K	289	289
Methane in Tank	ppm	198000	204000
TNMHC, Tank(noncond.)	ppm	863	812
ICV Volume	liters	2.266	2.266
ICV Final Pressure	mm Hg	800	800
ICV Final Temp.	K	289	289
CO2 in ICV	ppm	1740	1240
TNMHC, Trap(cond.)	ppm	1007	766
Stack Total TNMHC	ppm	1870	1578
Stack Total TNMHC	mg CH4/dscm	1225.8	1034.7

**HORIZON**

APPENDIX B

Laboratory Data



## Atmosphere Assessment Associates

21354 Nordhoff St., Suite 113, Chatsworth, CA 91311 (818) 718-6070

environmental consultant.  
laboratory services

### LABORATORY ANALYSIS REPORT

CO, CH<sub>4</sub>, CO<sub>2</sub>, &  
Total Gaseous Non-Methane Organics (TGNMO) Analysis  
in Tanks and Traps by SCAQMD Method 25  
(FID/TCA)

Report Date: April 30, 1990  
P.O. No.: Verbal  
Client: Horizon  
Source Location: Hewitt Landfill  
Source Test Date: April 26, 1990  
Source ID: CALMAT

Date Received: April 26, 1990  
Date Analyzed: April 27, 1990

#### FID/TCA Analysis - SCAQMD Method 25

Laboratory No.:	91160-6	91160-7
Sample ID. No.:	Tank F	Tank G

-----  
Tank Contents:


Final Pressure	800	800
Initial Pressure	240	225

-----  
Component Conc.:  
(ppm, v/v)

CO	99.5	102
CH <sub>4</sub>	198000	204000
CO <sub>2</sub>	203000	208000
TGNMO	863	812

-----  
Trap No.: F G  
Transfer Tank No.: ICV-12 ICV-9  
Conc. of CO<sub>2</sub> in  
Transfer Tank 1740 1240  
(ppm, v/v)  
Transfer Tank Vol.: 2.2 2.2  
-----

NOTE: Tank pressure is in mm Hg.  
TGNMO is total gaseous non-methane organics as ppm methane.  
Transfer tank volume is in liters.

  
Michael L. Porter  
Laboratory Director



# Atmosphere Assessment Associates

21354 Nordhoff St., Suite 113, Chatsworth, CA 91311 (818) 718-6070

environmental consultants  
laboratory services

## LABORATORY ANALYSIS REPORT

Methane, TGNMO &  
C<sub>1</sub>-C<sub>3</sub> Sulfur Compounds  
in Tedlar Bag Samples

Project No.: C01-001  
Site : Hewitt Landfill  
Source Test Date: April 26, 1990  
Date Received: April 27, 1990  
Date Analyzed: April 27, 1990

Methane and TGNMO are analyzed by flame ionization detection/total combustion analysis (FID/TCA), SCAQMD Method 25, analysis portion and C<sub>1</sub>-C<sub>3</sub> sulfur compounds are analyzed by Electron Capture Detection/gas chromatograph (ECD/GC).

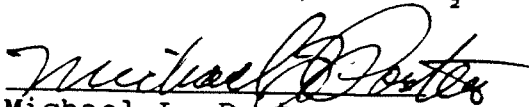
AAA Lab No.:	91160-3	91160-4
Sample ID No.:	CM-O-1B	CM-O-1A
	4/26/90	4/26/90

<u>Component</u>	(Concentration in ppm,v/v)	
Methane	4.58	<1
TGNMO	1.31	<1
-----		

AAA Lab No.:	91160-5
Sample ID No.:	HL-I-S
	4/26/90

<u>Component</u>	(Concentration in ppm,v/v)
Hydrogen Sulfide	21.5
C <sub>1</sub> -C <sub>3</sub> Sulfur- compounds	ND

Note: ND= not detected with the lower limit of <0.4 ppm for each of the C<sub>1</sub>-C<sub>3</sub> sulfur compounds are for methylmercaptan, ethylmercaptan, propylmercaptan, dimethyl sulfide, and CS<sub>2</sub>.

  
Michael L. Porter  
Laboratory Director

QUALITY ASSURANCE SUMMARY  
(Duplicates Analyses)

P.O. No.: Verbal  
 AAA Project No.: 353  
 Horizon Project No.: C01-001  
 Site : Hewitt Landfill

TCA Samples

Date Received: April 26, 1990  
 Date Analyzed: April 27, 1990

<u>Component</u>	<u>Sample ID</u>	<u>Duplicates Analyses</u>		<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
		<u>Run #1</u>	<u>Run #2</u>		
(concentration in ppm, v/v)					
CO	TK-F	99.8	99.2	99.5	0.30
CH <sub>4</sub>	TK-F	198000	198000	198000	0.0
CO <sub>2</sub>	TK-F	204000	202000	203000	0.49
TGNMO	TK-G	768	856	812	5.4
CO <sub>2</sub> (in trap, transfer tanks)	ICV-9 (TK G)	1230	1260	1240	1.2

TGNMO is total gaseous non-methane organics reported as ppm methane.

A set of 2 TCA samples, laboratory numbers 91160-(6-7) was analyzed for CO, methane, carbon dioxide, and TGNMO. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicates analyses are an important part of Atmosphere Assessment Associates' quality assurance program. The average % Difference from Mean for 5 duplicate measurements from the sample set of 2 samples is 1.5%.

Gas standards (containing CO, methane, carbon dioxide, and propane) used for TCA analyses, were prepared and certified by Scott Specialty Gases.



QUALITY ASSURANCE SUMMARY  
(Duplicates Analyses)

P.O. No.: Verbal  
AAA Project No.: 353  
Horizon Project No.: CO1-001  
Site : Hewitt Landfill

Tedlar Bag Samples

Date Received: April 26, 1990  
Date Analyzed: April 27, 1990

<u>Component</u>	<u>Sample ID</u>	<u>Duplicates Analyses</u>		<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
		<u>Run #1</u>	<u>Run #2</u>		
		(concentration in ppm, v/v)			
CH <sub>4</sub>	CM-O-1A	<1	<1	---	---
TGNMO	CM-O-1A	<1	<1	---	---
H <sub>2</sub> S	HL-I-S	21.4	21.6	21.5	0.46
C <sub>1</sub> -C <sub>3</sub> Sulfur compounds	HL-I-S	<0.4	<0.4	---	---

TGNMO is total gaseous non-methane organics reported as ppm methane.

A set of 3 Tedlar bag samples, laboratory numbers 91160-(3-5) was analyzed for methane, TGNMO, hydrogen sulfide, and C<sub>1</sub>-C<sub>3</sub> Sulfur compounds. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicates analyses are an important part of Atmosphere Assessment Associates' quality assurance program. The average % Difference from Mean for one duplicate measurement from the sample set of 3 samples is 0.46%.

Gas standards (containing CO, methane, carbon dioxide, and propane) used for TCA analyses, were prepared and certified by Scott Specialty Gases.





**Performance Analytical Inc.**  
Environmental Testing and Consulting

**PERFORMANCE ANALYTICAL INC.**

**RESULTS OF ANALYSIS**

Client: Horizon Air Measurement Services

Client Sample ID: CM-0-1A-GC/MS

PAI Sample ID: 9001641

Test Code: GC/MS EPA TO-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 1.0 Liters

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	ND	20	ND	7.9
75-35-4	1,1-DICHLOROETHENE	ND	20	ND	5.1
75-09-2	METHYLENE CHLORIDE	TR 18	20	TR 5.2	5.8
67-66-3	CHLOROFORM	ND	20	ND	4.1
107-06-2	1,2-DICHLOROETHANE	ND	20	ND	5.0
71-55-6	1,1,1-TRICHLOROETHANE	ND	20	ND	3.7
71-43-2	BENZENE	ND	20	ND	6.3
56-23-5	CARBON TETRACHLORIDE	ND	20	ND	3.2
79-01-6	TRICHLOROETHENE	ND	20	ND	3.7
108-80-5	TOLUENE	70	20	19	5.3
127-18-4	TETRACHLOROETHENE	TR 3.1	20	TR 0.5	3.0
108-90-7	CHLOROBENZENE	ND	20	ND	4.4
1330-20-7	TOTAL XYLENES	28	20	6.5	4.6
106-46-7	1,4-DICHLOROBENZENE	ND	20	ND	3.3

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit



**Performance Analytical Inc.**  
Environmental Testing and Consulting

**PERFORMANCE ANALYTICAL INC.**

**RESULTS OF ANALYSIS**

Client: Horizon Air Measurement Services

Client Sample ID: CM-I-GC/MS

PAI Sample ID: 9001640

Test Code: GC/MS EPA TO-14  
Analyst: Michael Tuday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 100 mL

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	1300	200	510	79
75-35-4	1,1-DICHLOROETHENE	ND	200	ND	51
75-09-2	METHYLENE CHLORIDE	ND	200	ND	58
67-66-3	CHLOROFORM	TR 48	200	TR 9.9	41
107-06-2	1,2-DICHLOROETHANE	ND	200	ND	50
71-55-6	1,1,1-TRICHLOROETHANE	ND	200	ND	37
71-43-2	BENZENE	8400	200	2600	63
56-23-5	CARBON TETRACHLORIDE	ND	200	ND	32
79-01-6	TRICHLOROETHENE	1300	200	240	37
108-80-5	TOLUENE	18000	200	4800	53
127-18-4	TETRACHLOROETHENE	2200	200	330	30
108-90-7	CHLOROBENZENE	2100	200	460	44
1330-20-7	TOTAL XYLENES	30000	200	6900	46
106-46-7	1,4-DICHLOROBENZENE	2500	200	420	33

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit



**Performance Analytical Inc.**  
Environmental Testing and Consulting

**PERFORMANCE ANALYTICAL INC.**

**RESULTS OF ANALYSIS**

**Client:** Horizon Air Measurement Services

**Client Sample ID:** CM-I-GC/MS LABORATORY DUPLICATE

**PAI Sample ID:** 9001640D

**Test Code:** GC/MS EPA TO-14  
**Analyst:** Michael Taday  
**Instrument ID:** Finnigan 4500A/Tekmar 5010  
**Verified by:** Chris Casteel

**Matrix:** Tedlar Bag  
**Date Received:** 04/27/90  
**Date Analyzed:** 04/27/90  
**Volume Analyzed:** 100 mL

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	1600	200	630	79
75-35-4	1,1-DICHLOROETHENE	ND	200	ND	51
75-09-2	METHYLENE CHLORIDE	ND	200	ND	58
67-66-3	CHLOROFORM	TR 57	200	TR 12	41
107-06-2	1,2-DICHLOROETHANE	ND	200	ND	50
71-55-6	1,1,1-TRICHLOROETHANE	ND	200	ND	37
71-43-2	BENZENE	9500	200	3000	63
56-23-5	CARBON TETRACHLORIDE	ND	200	ND	32
79-01-6	TRICHLOROETHENE	1400	200	260	37
108-80-5	TOLUENE	19000	200	5000	53
127-18-4	TETRACHLOROETHENE	2300	200	340	30
108-90-7	CHLOROBENZENE	2400	200	520	44
1330-20-7	TOTAL XYLENES	34000	200	7800	46
106-46-7	1,4-DICHLOROBENZENE	2900	200	480	33

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit



**Performance Analytical Inc.**  
Environmental Testing and Consulting

**PERFORMANCE ANALYTICAL INC.**

**RESULTS OF ANALYSIS**

Client: Horizon Air Measurement Services  
Client Sample ID: CM-O-1A-GC/MS LABORATORY DUPLICATE  
PAI Sample ID: 9001641D

Test Code: GC/MS EPA TO-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 1.0 Liters

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	ND	20	ND	7.9
75-35-4	1,1-DICHLOROETHENE	ND	20	ND	5.1
75-09-2	METHYLENE CHLORIDE	20	20	5.8	5.8
67-66-3	CHLOROFORM	ND	20	ND	4.1
107-06-2	1,2-DICHLOROETHANE	ND	20	ND	5.0
71-55-6	1,1,1-TRICHLOROETHANE	ND	20	ND	3.7
71-43-2	BENZENE	ND	20	ND	6.3
56-23-5	CARBON TETRACHLORIDE	ND	20	ND	3.2
79-01-6	TRICHLOROETHENE	ND	20	ND	3.7
108-80-5	TOLUENE	78	20	21	5.3
127-18-4	TETRACHLOROETHENE	TR 2.3	20	TR 0.3	3.0
108-90-7	CHLOROBENZENE	ND	20	ND	4.4
1330-20-7	TOTAL XYLENES	29	20	6.7	4.6
106-46-7	1,4-DICHLOROBENZENE	ND	20	ND	3.3

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit

PAGES	PAGE
TEST NO. Flare Outlet Run 1	DATE 4-26-90
PROCESSED BY MTZ	CHECKED BY [Signature]

# CALCULATION SHEET

## LAB ANALYSIS

A. Filter Catch .....	1.3	mg
B. (1) Filter Acid .....		mg
(2) Filter Total Sulfate .....		mg
C. Probe Catch .....		mg
D. (1) Probe Acid .....		mg
(2) Probe Total Sulfate .....		mg
E. Impinger Catch .....		mg
F. (1) Impinger Acid .....	57.4	mg
(2) Impinger Total Sulfate .....		mg
G. Organic Extract .....		mg
H. H <sub>2</sub> SO <sub>4</sub> .2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble .....	4.6	mg
I. Particulate Train Corrected Gas Volume Metered .....		dscf
J. SO <sub>x</sub> Train Corrected Gas Volume Metered .....		dscf
K. Procorated H <sub>2</sub> SO <sub>4</sub> .2H <sub>2</sub> O Mass ( $\frac{H \times I}{J}$ ) .....		mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A-B*+C-D*+E-F*+G+K) .....		mg
M. Solid Particulate (L-G-K) .....		mg
N. Total Particulate (Corrected for Ammonium Sulfate)		
(A-B*+C-D*+E-F(1)*G+K-[F(2)-(1)] $\cdot \frac{132}{134}$ ) .....		mg
O. Solid Particulate (Corrected for Ammonium Sulfate)		
(N-G-J) .....		mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F*+G) .....	63.3	mg
Q. Solid Particulate (P-B*-D*-G) .....	58.7	mg
R. Total Particulate (Corrected for Ammonium Sulfate)		
(A+C+E-F(1)*G-[F(2)-F(1)] $\cdot \frac{132}{134}$ ) .....		mg
S. Solid Particulate (Corrected for Ammonium Sulfate)		
(R-B*-D*-G) .....		mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

PAGES		PAGE
TEST NO. Flare Outlet Run 2		DATE 4-27/90
PROCESSED BY MTZ		CHECKED BY [Signature]

# CALCULATION SHEET

## LAB ANALYSIS

A. Filter Catch ..... 0.0 mg  
 B. (1) Filter Acid ..... mg  
    (2) Filter Total Sulfate ..... mg  
 C. Probe Catch ..... mg  
 D. (1) Probe Acid ..... mg  
    (2) Probe Total Sulfate ..... mg  
 E. Impinger Catch ..... mg  
 F. (1) Impinger Acid ..... 22.6 mg  
    (2) Impinger Total Sulfate ..... mg  
 G. Organic Extract ..... mg  
 H. H<sub>2</sub>SO<sub>4</sub>·2H<sub>2</sub>O from SO<sub>x</sub> Train Thimble ..... 2.5 mg  
 I. Particulate Train Corrected Gas Volume Metered ..... dscf  
 J. SO<sub>x</sub> Train Corrected Gas Volume Metered ..... dscf  
 K. Proxated H<sub>2</sub>SO<sub>4</sub>·2H<sub>2</sub>O Mass ( $\frac{H \times I}{J}$ ) ..... mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A-B\*+C-D\*+E-F\*+G+K) ..... mg  
 M. Solid Particulate (L-G-K) ..... mg  
 N. Total Particulate (Corrected for Ammonium Sulfate)  
    (A-B\*+C-D\*+E-F(1)+G+K-[F(2)-(1)]  $\cdot \frac{132}{134}$ ) ..... mg  
 O. Solid Particulate (Corrected for Ammonium Sulfate)  
    (N-G-J) ..... mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F\*+G) ..... 25.1 mg  
 Q. Solid Particulate (P-B\*-D\*-G) ..... 22.6 mg  
 R. Total Particulate (Corrected for Ammonium Sulfate)  
    (A+C+E-F(1)+G-[F(2)-F(1)]  $\cdot \frac{132}{134}$ ) ..... mg  
 S. Solid Particulate (Corrected for Ammonium Sulfate)  
    (R-B\*-D\*-G) ..... mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

PAGES	PAGE
TEST NO. Extraction Blank	DATE 5-8-90
PROCESSED BY MTZ	CHECKED BY [Signature]

# CALCULATION SHEET

## LAB ANALYSIS

A. Filter Catch .....	_____	mg
B. (1) Filter Acid .....	_____	mg
(2) Filter Total Sulfate .....	_____	mg
C. Probe Catch .....	_____	mg
D. (1) Probe Acid .....	_____	mg
(2) Probe Total Sulfate .....	_____	mg
E. Impinger Catch .....	_____	mg
F. (1) Impinger Acid .....	- 0.7	mg
(2) Impinger Total Sulfate .....	_____	mg
G. Organic Extract .....	3.4	mg
H. H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble .....	_____	mg
I. Particulate Train Corrected Gas Volume Metered .....	_____	mg
J. SO <sub>x</sub> Train Corrected Gas Volume Metered .....	_____	dscf
K. Pro-rated H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O Mass ( $\frac{H \times I}{J}$ ) .....	_____	dscf
	_____	mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A-B*+C-D*+E-F*+G+K) .....	_____	mg
M. Solid Particulate (L-G-K) .....	_____	mg
N. Total Particulate (Corrected for Ammonium Sulfate)		
(A-B*+C-D*+E-F(1)+G+K-[F(2)-(1)] $\times \frac{132}{134}$ ) .....	_____	mg
O. Solid Particulate (Corrected for Ammonium Sulfate)		
(N-G-J) .....	_____	mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F*+G) .....	2.7	mg
Q. Solid Particulate (P-B*-D*-G) .....	_____	mg
R. Total Particulate (Corrected for Ammonium Sulfate)		
(A+C+E-F(1)+G-[F(2)-F(1)] $\times \frac{132}{134}$ ) .....	_____	mg
S. Solid Particulate (Corrected for Ammonium Sulfate)		
(R-B*-D*-G) .....	_____	mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

APPENDIX C

Field Data Sheets

FILTER DATA		
NUMBER	TARE	FINAL WT
664		

INITIAL	TIME	CO <sub>2</sub>	O <sub>2</sub>	CO
100	50.0			
125				
100				
125				
SILICA GEL			H <sub>2</sub> O	
261.9	273.2	11.3	(61.3)	

[illegible]

INITIAL	LEAK	✓	@	15" Hg	- 0.020
FINAL	LEAK	✓	@	5" Hg	- 0.010

INITIAL pitot  $V - OK$   
FINAL pitot  $V - OK$



580 IT 'ANI' - 22 2.07  
4/27/90

Test Location FLARE OUTLET

Run Number 2ASlack Diameter inches 96

Overall Dimensions in. x in.

Staff Time 810

Opinion RRN, 95M

## Static Properties

## Stack Pressure

Probe Number

### Pilot Conflicts

Pilot Number           

Motor Bcr Num

### Orifice Coefficients

- 6:05

10' (BTC)

0.840

10' (BTC)

II

$$Y = 1.00, \Delta H^{\circ} = 1.7$$

North Side & HINDU (30)

### Minerals Wound

BWC

FILTER DATA

NUMBER	TARE	INITIAL WT.
65		

INITIALS VOLUME	FINAL	CO <sub>2</sub>	O <sub>2</sub>	CO
100 124				
100 124				
Ø				
SILICA GEL				
254.5 259.0				

[illegible]

Initial LEAK via 5" Hg - 0.010

FINAL LEAK  $\leq 5'' \text{ Hg} - 0.010$

INSTRAL PITOT ✓ - OK

FINAC pitot ✓ - OK

[illegible]

# METHOD 2 GAS VELOCITY AND VOLUME DATA FORM

PLANT Howitt Landfill

DATE 4-26-90

RUN NO. INITIAL TRAVERSE

STACK DIAMETER, in. 96"

BAROMETRIC PRESSURE, in. Hg. 30.04

STATIC PRESSURE IN STACK ( $P_s$ ), in. Hg. 8

OPERATORS RRH, SSM, RV

SCHEMATIC OF STACK  
CROSS SECTION

## Field data

Traverse point number	Position, in.	Velocity head ( $\Delta p_s$ ), in. $H_2O$	Stack temp., °F	Cyclonic flow determination	
				$\Delta p_s$ at 0° reference	Angle ( $\alpha$ ) which yields a null $\Delta p$
A-1	2.02	0.005	1410		<5
2	6.43	0.005			<5
3	11.33	0.005			<5
4	16.99	0.017			<5
5	24.0	0.017			<5
6	34.18	0.020			<5
7	61.82	0.015			<5
8	72.00	0.015			<5
9	79.00	0.020			<5
10	84.67	0.025			<5
11	89.57	0.025			<5
12	93.98	0.025			<5
B-1		0.005			<5
2		0.010			<5
3		0.010			<5
4		0.015			<5
5		0.017			<5
6		0.020			<5
7		0.020			<5
8		0.017			<5
9		0.017			<5
10		0.010			<5
11		0.010			<5
12		0.010			<5
Average angle ( $\alpha$ )					<5

TOTAL COMBUSTION ANALYSIS  
SCAQMD METHOD 25  
FIELD SAMPLING DATA SHEET

Job #: 101-001

Control Device: Flare

Facility: Hewlett Landfill

Sample Location: Inlet

Location: North Hollywood

Ambient Temperature: 85

Date: 4/26/90

Barometric Pressure: \_\_\_\_\_

Operator: RV/RH/SSM

SAMPLE A

SAMPLE B

Tank #: F Trap #: F

Tank #: G Trap #: G

Initial Vacuum: 4.5 mm Hg

Initial Vacuum: 4.5 mm Hg

Final Vacuum: 240

Final Vacuum: 225

ANALYSIS PRESSURE 800

800

TIME	VACUUM ("Hg)	FLOW (cc/min)
0	30	72
5	29	72
10	28	72
15	27	72
20	26	72
25	25	72
30	24	72
35	23	72
40	22	72
45		

TIME	VACUUM ("Hg)	FLOW (cc/min)
0	30	72
5	29	72
10	26	72
15	25	72
20	24	72
25	24	72
30	23	72
35	22	72
40	21	72
45		

Leak Rate Pre Test: OK

Post Test: \_\_\_\_\_

HORIZON

## INTEGRATED BAG SAMPLING DATA FORM

Run number 1A & B outlet

Date 4-15-90

Plant HEWLETT LANDFILL

Sampling location OUTLET OF FLARE

Barometric pressure 30.04

Ambient temp. °C 85 Stack temp. °C 1300

Operator RRLH

[illegible]

**a**

$$\% \text{ Dev.} = \left( \frac{Q - Q_{avg}}{Q_{avg}} \right) 100; \text{ must be } \leq 10\%.$$

## INTEGRATED BAG SAMPLING DATA FORM

Run number 1A0B IN1C7

Date 4-15-90

Plant NEWLETT LANDFILL

Sampling location Hewlett Landfill - Inlet - Flare

Barometric pressure 30.04

Ambient temp. °C 85

Stack temp. °C ~~1000~~

Operator RRH, SSM, KU

Time	Traverse point	Rate meter flow, rate ( $Q$ ), $\text{cm}^3/\text{min}$	% Dev. <sup>a</sup>
1605	INLET	100 cc	
10		100 cc	
20		100 cc	
30		100 cc	
stop 40		100 cc	
50		100 cc	
60		100 cc	
		Avg =	

a

$$\% \text{ Dev.} = \left( \frac{Q - Q_{avg}}{Q_{avg}} \right) 100; \text{ must be } \leq 10\%.$$

# Horizon FLARE TEST

1159

4-26-90

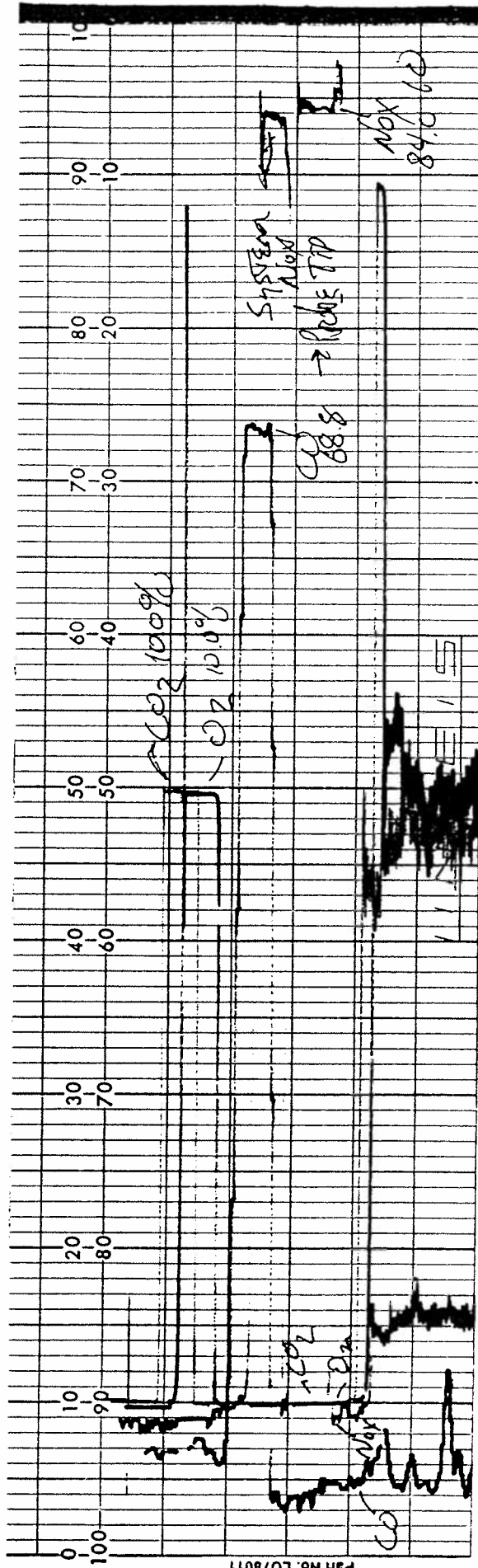
② CAL MAT North Hollywood

5.01

50:07







Part No. LO/8011

SYSTEM

→ 100% TTP

88.8

84% 100%

Date: 4-26-90

Page 2 of 2

## Continuous Emissions Monitoring - C.A.R.B. Method 1-100

Client: CALMATSite: NEWITT AND FILLUnit: FLARERun #: 1Times: Beg. Cal# 1600 Start# 1610 Stop# 1710 End Cal# 1710

## \*\* MEASURED EMISSIONS COMPONENTS \*\*

Component:	In NOx	In O2	Out NOx	Out O2	Out CO	Out CO2	Conversion Efficiency
Units:	ppm	%	ppm	%	ppm	%	(In-Out) / In NOx @ 15% O2

## \*\* INSTRUMENT CAL RANGE, SPAN &amp; DATA RANGE \*\*

C. Range:	<u>100</u>	<u>100</u>	<u>25</u>	<u>100</u>	<u>25</u>
Span:	<u>84.0</u>	<u>10</u>	<u>68.8</u>	<u>10</u>	<u>25</u>
D. Range:	<u>100</u>	<u>100</u>	<u>25</u>	<u>100</u>	<u>25</u>

## \*\* RAW EMISSIONS DATA \*\*

<u>1610</u>	0	<u>7</u>	<u>9.75</u>	<u>15</u>	<u>9.5</u>
	5	<u>6</u>	<u>10.5</u>	<u>5</u>	<u>10.0</u>
	10	<u>7</u>	<u>10.2</u>	<u>0</u>	<u>10.0</u>
	15	<u>6</u>	<u>10.4</u>	<u>16</u>	<u>10.0</u>
	20	<u>6</u>	<u>10.2</u>	<u>0</u>	<u>11.5</u>
	25	<u>6</u>	<u>10.0</u>	<u>0</u>	<u>10.5</u>
	30	<u>7</u>	<u>10.2</u>	<u>6</u>	<u>9.5</u>
	35	<u>7</u>	<u>10.5</u>	<u>0</u>	<u>9.7</u>
	40	<u>5</u>	<u>10.2</u>	<u>4</u>	<u>10.0</u>
	45	<u>6</u>	<u>10.0</u>	<u>6</u>	<u>10.0</u>
	50	<u>6</u>	<u>10.2</u>	<u>6</u>	<u>10.0</u>
	55	<u>7</u>	<u>10.7</u>	<u>1</u>	<u>10.2</u>
<u>1710</u>	60	<u>8</u>	<u>10.5</u>	<u>2</u>	<u>10.0</u>

Raw Avg.: 6.5 10.2 4.7 10.1Maximum: 8 10.7 16 11.5Minimum: 5 9.75 0 9.5

## \*\* CALIBRATION ADJUSTMENTS \*\*

Zero:	<u>+1</u>	<u>0</u>	<u>+1</u>	<u>0</u>
Span:	<u>-3</u>	<u>0</u>	<u>0</u>	<u>0</u>
Span Set:				

## \*\* DRIFT CORRECTED EMISSIONS \*\*

Average: \_\_\_\_\_

NOTES \*\*

$$DCAvg = (RawAvg + (ZeroAdj/2) * (DataRng/CalRng)) * (1 + (SpanAdj/(2 * CalSpan)))$$

**APPENDIX D**  
**Calibrations**

# Gas Control Engineering, Inc.

December 1, 1991  
1003-1

Mr. Ken Ellis  
South Coast Air Quality Management District  
Toxics Unit, Engineering Division  
21865 Copley Drive  
Diamond Bar, California 91765-4182

**Subject: Air Toxics Inventory Report for Hewitt Landfill (Facility ID 3530)**

Dear Mr. Ellis:

Enclosed is the 1990 air toxics inventory report for Hewitt Landfill. Because all of the appendix A1 compounds are below the applicable degree of accuracy, they have been listed on form S-UP. All items requested on the "Checklist for 1990 ATIR Submission" have been included. Additionally, calculations showing the worst case flare emissions, a copy of the 1990 flare source test report and an area map of the landfill are included in attachment 1, 2 and 3 respectively.

Should you have any questions on this submittal please contact:

Dick Prosser  
Gas Control Engineering  
5362 Lindford Lane  
Yorba Linda, California 92686  
(714) 777-2863

CALMAT -  
FILE COPY  
AB2588 COMPLIANCE  
REPORT FOR  
HEWITT LANDFILL.

Very truly yours,



Dick Prosser

cc: George Cosby

1990

9150 Flair Drive  
El Monte, CA 91731  
ATTN: ENGINEERING DIVISION (TOXICS UNIT)

1990

AB 2588 AIR TOXICS INVENTORY REPORT  
APPLICATION FORM

1990

Company Name:

CALMAT PROPERTIES CO

Mailing Address:

3200 SAN FERNANDO ROAD

LOS ANGELES, CALIF. 90065

Facility Address:

7361 LAUREL CANYON BLVD.

N. HOLLYWOOD, CALIF. 91605

Facility AQMD ID #:

3530

(From your plan approval letter)

Contact Person (Company Official):

GEORGE COSBY

Telephone #:

213 258-2777

Report Preparer (If not a Company Official):

DICK PROSSER

Telephone #:

714 777-2863

Signature of the Report Preparer:



Signature of Responsible Company Official:

THIS FORM MUST BE FILLED OUT AND MAILED WITH THE INVENTORY REPORT

Plan Date

1990

1990

## FACILITY EMISSION SUMMARY FORM

1990

COMPANY		AQMD ID	
APPENDIX A-I SUBSTANCES		FACILITYWIDE EMISSIONS	
AIR TOXIC NAME	CAS NO.	MAXIMUM LBS/HR	AVERAGE LBS/YR
BENZENE	71-43-2	9.3E-04	8.2
CHLOROBENZENE	108-90-7	9.3E-04	8.1
CHLOROFORM	67-66-3	9.3E-04	8.1
CARBON TETRACHLORIDE	56-23-5	9.4E-04	8.2
1,2 DICHLOROETHANE	107-06-02	9.4E-04	8.2
HYDROGEN SULFIDE	77-830-64	7.9E-04	6.9
METHYLENE CHLORIDE	75-09-2	9.4E-04	8.2
TETRACHLOROETHENE	127-18-4	9.5E-04	8.3
TRICHLOROETHYLENE	79-01-6	9.2E-04	8.1
1,1,1 TRICHLOROETHANE	71-55-6	9.4E-04	8.2
1,4 DICHLOROBENZENE	106-46-7	9.2E-04	8.1
TOLUENE	108-88-3	3.5E-03	30.7
VINYL CHLORIDE	75-01-4	9.4E-04	8.2
TOTAL XYLENES	1115	1.3E-03	11.7
1,1 DICHLOROETHENE	75-35-4	9.4E-04	8.2

THE INVENTORY SHOULD BE FOR THE PERIOD JAN 1, 1990 THRU DEC 31, 1990

ENG:

AB 2588 ATIR 90

Facility SCAQMD ID# 3530

Company Name CALMAT PROPERTIES CO.

Facility Location Address 7361 LAUREL CANYON BLVD, N. HOLLYWOOD CA 91605

Receptor Proximity Form for AB-2588 Air Toxics "Hot Spots" Prioritization

Please provide answers to the following questions in terms of meters. 100 meters is equal to about 108 yards or 325 feet. If your measurements are originally in feet or yards, please convert them to meters. (Meters = Feet X 0.3048)

1. What is the closest distance between any source of air toxic emissions at your facility and the property boundary of any one of these receptors -- other business, work-site, school, day-care center, shopping center, park, or hospital?

Less than 50 meters (160 feet)  
☒ Less than 100 meters Less than 1,500 meters  
☐ Less than 250 meters Less than 2,000 meters  
☐ Less than 500 meters Greater than 2,000 meters  
☐ Less than 1,000 meters (1,080 yards) RECEPTOR TYPE OTHER BUSINESS

Place check mark in front of appropriate distance category and indicate type of receptor.  
Please note that vacant commercial/industrial lots will also be considered work places.

Important! If distance is less than 250 meters ( 270 yards or 810 feet ) and more than 50 meters ( 54 yards or 160 feet ), provide actual distance in meters.

95 meters.

2. What is the closest distance between any source of air toxic emissions at your facility and the property boundary of any one of these receptors -- house, apartment, convalescent home, trailer park, or other residence?

Less than 50 meters (160 feet)  
☐ Less than 100 meters Less than 1,500 meters  
☒ Less than 250 meters Less than 2,000 meters  
☐ Less than 500 meters Greater than 2,000 meters  
☐ Less than 1,000 meters (1,080 yards) RECEPTOR TYPE HOUSE

Place check mark in front of appropriate distance category and indicate type of receptor.  
Please note that vacant lots zoned as residential will also be considered residences.

Important! If distance is less than 250 meters ( 270 yards or 810 feet ) and more than 50 meters ( 54 yards or 160 feet ), provide actual distance in meters.

245 meters.

Documentation must be provided to support the distance information provided. Include copies of appropriate maps with map scale (in feet, meters, etc.). U.S. Geological Survey (7 1/2 minute), "Thomas Brothers Guide", "Auto Club" or other similar maps are acceptable if the map provides sufficient detail.

EMISSION  
YEAR  
19 90

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
FACILITY DESCRIPTION

FORM  
FAC

FACILITY DATA

COMPANY NAME

CALMAT PROPERTIES CO.

ADDRESS

7361 LAUREL CANYON BLVD.

CITY

N. HOLLYWOOD, CA.

ZIP CODE

91605

CONTACT PERSON

DICK PROSSER

TELEPHONE

714-777-2863

FACILITY SIC

9511

NUMBER OF EMPLOYEES

4

MAILING ADDRESS DATA

COMPANY NAME

CALMAT PROPERTIES CO.

ADDRESS

3200 SAN FERNANDO ROAD

CITY

LOS ANGELES

STATE

CA

ZIP CODE

90065

ATTENTION

GEORGE COSBY

FOR OFFICE USE ONLY

COUNTY  
ID:

FACILITY ID:

ACTION CODE:

DISTRICT:

AIR BASIN CODE:

CITY CODE  
(OPTIONAL)

AQCR  
(OPTIONAL)

SUBCOUNTY ID

FACD1 (OPTIONAL)

FACD2 (OPTIONAL)

UTM ZONE

UTM EAST

UTM NORTH

NAME: Dick Prosser

DATE: 12/2/91

ARB/FAC/080289

EMISSION  
YEAR  
1990AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
STACK DATAFORM  
STK

FOR OFFICE USE ONLY

COUNTY ID:

FACILITY ID:

DO NOT DELETE STACK IF IT SERVES OTHER DEVICES. SEE INSTRUCTIONS

DESC  
CODE

STACK/VENT CATEGORY

REQUIRED INFORMATION

AMBIENT TEMP & LOW-VELOCITY EXHAUST (T W/IN 25 F OF AMBIENT & V LT 750 FPM)

- |   |   |                                |
|---|---|--------------------------------|
| 1 | RELEASE POINT (RP) AT GROUND-LEVEL  | STACK ID & CODE ONLY           |
| 2 | RELEASE FROM BLDG HVAC ONLY   | STACK ID, CODE, & STACK HEIGHT |
| 3 | RP W/IN (2.5 X HB) ABOVE GROUND AND<br>W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | STACK ID, CODE & STACK HEIGHT  |
| 4 | OTHER STACK/VENT (LOW T,V)  | STACK ID, CODE & STACK HEIGHT  |

OTHER TEMP & FLOW CONDITIONS

- |   |   |                       |
|---|---|-----------------------|
| 5 | RP W/IN (2.5 X HB) ABOVE GROUND AND<br>W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | ALL STACK INFORMATION |
| 6 | OTHER STACK/VENT (OTHER T,V)  | ALL STACK INFORMATION |

WHERE HB = HEIGHT OF NEAREST BUILDING

AND HVAC = HEATING, VENTILATING AND AIR CONDITIONING

OFC USE

\*OFC USE ONLY\*

ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)\*\*\*\*\* EXHAUST \*\*\*\*\*  
GAS  
TEMP (F)GAS FLOW RATE  
(CFM)UTM EAST  
(KILOMETER)

90001

6

24

8

1550

44,000

GAS VELOCITY  
(FPM)UTM NORTH  
(KILOMETER)

1875

ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)GAS  
TEMP (F)GAS FLOW RATE  
(CFM)UTM EAST  
(KILOMETER)GAS VELOCITY  
(FPM)UTM NORTH  
(KILOMETER)ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)GAS  
TEMP (F)GAS FLOW RATE  
(CFM)UTM EAST  
(KILOMETER)GAS VELOCITY  
(FPM)UTM NORTH  
(KILOMETER)ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)GAS  
TEMP (F)GAS FLOW RATE  
(CFM)UTM EAST  
(KILOMETER)GAS VELOCITY  
(FPM)UTM NORTH  
(KILOMETER)NAME DICK PROSSERDATE 12/2/91

ARB-STK-890323

EMISSION  
YEAR  
1990

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
DEVICE DESCRIPTION AND DEVICE-STACK RELATIONS

FORM  
DEV

FOR OFFICE USE ONLY

COUNTY ID:

FACILITY ID:

OFFICE USE

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV.

70001

FLARE

STACK ID

PERMIT ID (IF AVAILABLE)

90001

164827

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV.

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV.

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV.

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV.

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV.

\*\*\*\*\* OFFICE USE ONLY \*\*\*\*\*  
\*\*\*\* EACH ITEM IS OPTIONAL \*\*\*\*

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

NAME DICK PROSSER

DATE 12/2/91

ARB/DEV/240389

EMISSION  
YEAR  
19 90

AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT  
PROCESS AND EMITTENTS DATA

FORM  
PRO  
SIDE A

FOR OFFICE USE ONLY

PROCESS DESCRIPTION

SCC NO

COUNTY  
ID:

AIR  
BASIN

ACTION  
CODE

PROD1 (OPTIONAL)

PROD2 (OPTIONAL)

FACILITY ID:

STOP

FILL OUT ANY SUPPLEMENTAL PROCESS FORM(S) FOR THIS PROCESS FIRST, THEN FILL OUT THIS PAGE, SUBMITTING ONE FOR EACH EMITTING PROCESS IN YOUR FACILITY.

SECTION 1

PROCESS DATA

DEVICE  
I.D.

7 0 0 0 1

SIC

9 5 1 1

CONFIDENTIAL (Y/N)

IF Y CHECK SMALL BOXES  
AS APPROPRIATE

N

PROCESS EQUIPMENT DESCRIPTION

F L A R E

FUEL TYPE /OTHER PROCESS INFO

L A N D F I L L G A S

NOTE USE 1 SPACE FOR EACH DECIMAL POINT

TOTAL YEARLY  
PROCESS RATE (UNITS/YR)

7 3 0

MAXIMUM HOURLY  
PROCESS RATE (UNITS/HR)

0 . 0 8 3

PROCESS UNITS

P T 0 7 4

HRS/  
DAY

2 4

DAYS/  
WEEK

7

WKS/  
YEAR

5 2

RELATIVE MONTHLY ACTIVITY (%)

C

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEP

OCT

NOV

DEC

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

OFFICE USE ONLY

ACTION  
CODE

ALLOWABLE EMIS  
LBS/YR(OPTIONAL)

SECTION 2 NOTE: ALL EMITTENTS ARE BELOW THE APPLICABLE DEGREE OF ACCURACY.  
EMITTENT DATA

EMITTENT ID

EST  
METH

ACTUAL EMISSIONS  
FACTOR(LBS/UNIT)

ANNUAL AVERAGE  
EMISSIONS (LBS/YR)

\*CONTROL EQPT CODES\*  
PRIMARY SECONDARY

OVERALL  
CONTROL EFF(%)

FULL/  
PART

HOURLY MAX EMISSIONS  
(LBS/HOUR)

EMITTENT ID

EST  
METH

ACTUAL EMISSIONS  
FACTOR(LBS/UNIT)

ANNUAL AVERAGE  
EMISSIONS (LBS/YR)

\*CONTROL EQPT CODES\*  
PRIMARY SECONDARY

OVERALL  
CONTROL EFF(%)

FULL/  
PART

HOURLY MAX EMISSIONS  
(LBS/HOUR)

NAME DICK PROSSER

DATE 12/2/91

ARB/PRO/890327

EMISSION  
YEAR  
1990

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
SUPPLEMENTAL PROCESS PARAMETER FORM  
SUBSTANCES USED, PRODUCED, OR OTHERWISE PRESENT

FORM  
**S-UP**

FACILITY NAME CALMAT PROPERTIES, CO.

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.  
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

FOR OFFICE USE ONLY

CO: ☐

AB: ☐

FACID: ☐

USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-II WHICH ARE  
USED, PRODUCED, OR OTHERWISE PRESENT.

PLEASE INDICATE (Y/N) UNDER THE APPROPRIATE CATEGORIES (USE, PRODUCTION, OR OTHER PRESENCE WITHIN YOUR FACILITY) OF ANY SUBSTANCE(S) LISTED IN APPENDIX A-II. "USED" REFERS TO SUBSTANCES WHICH ARE INGREDIENTS IN ANY ACTIVITY OR PROCESS AT YOUR FACILITY. "PRODUCED" REFERS TO SUBSTANCES WHICH ARE THE RESULT OF ANY ACTIVITY OR PROCESS TAKING PLACE IN YOUR FACILITY. "OTHERWISE PRESENT" REFERS TO SUBSTANCES PRESENT IN ANY OTHER WAY IN AN ACTIVITY OR PROCESS, SUCH AS BY-PRODUCTS OR REACTION INTERMEDIATES WHICH APPEAR TEMPORARILY DURING PROCESSING. PLEASE SPECIFY THE NATURE OF THE PRESENCE OF THE SUBSTANCE.

ALSO USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-I WHICH ARE PRESENT BELOW THE APPLICABLE DEGREE OF ACCURACY.

ALSO USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-I AND APPENDIX A-II WHICH ARE USED, PRODUCED, OR OTHERWISE PRESENT AT ANY FACILITY SUBJECT TO THE REQUIREMENTS OF SECTION 93308(C)

LISTED SUBSTANCE EMITTING ID	USED	PRODUCED	OTHERWISE PRESENT	(SPECIFY)
71-43-2	(N)	(N)	(Y)	IN LANDFILL GAS
108-90-7	(N)	(N)	(Y)	IN LANDFILL GAS
67-66-3	(N)	(N)	(Y)	IN LANDFILL GAS
56-23-5	(N)	(N)	(Y)	IN LANDFILL GAS
107-06-02	(N)	(N)	(Y)	IN LANDFILL GAS
77-830-64	(N)	(N)	(Y)	IN LANDFILL GAS
75-09-2	(N)	(N)	(Y)	IN LANDFILL GAS
127-18-4	(N)	(N)	(Y)	IN LANDFILL GAS
79-01-6	(N)	(N)	(Y)	IN LANDFILL GAS
71-55-6	(N)	(N)	(Y)	IN LANDFILL GAS
106-46-7	(N)	(N)	(Y)	IN LANDFILL GAS
108-88-3	(N)	(N)	(Y)	IN LANDFILL GAS
75-01-4	(N)	(N)	(Y)	IN LANDFILL GAS
1115	(N)	(N)	(Y)	IN LANDFILL GAS
75-35-4	(N)	(N)	(Y)	IN LANDFILL GAS
630080	(N)	(Y)	(N)	COMBUSTION BY PRODUCT

NAME: DICK PROSSER

DATE: 12/2/91

ARB/S-UP/90057

### CHECKLIST FOR 1990 ATIR SUBMISSION

- |             |     |  |    |
|-------------|-----|--|----|
| <u>✓</u>    | 1.  | AB2588 Air Toxics Inventory Report Application Form.   | OK |
| <u>✓</u>    | 2.  | Facility Emission Summary Form.  | OK |
| <u>✓</u>    | 3.  | Receptor Proximity Form for AB-2588 Air Toxics "Hot Spots" Prioritization.   | OK |
| <u>✓</u>    | 4.  | Facility Description (FAC) Form.   | OK |
| <u>✓</u>    | 5.  | Stack Data (STK) Form.   | OK |
| <u>✓</u>    | 6.  | Device Description and Device-Stack Relations (DEV) Form.  | OK |
| <u>✓</u>    | 7.  | Process and Emittents Data (PRO) Form: complete one PRO Form for each Process at each Device.  | OK |
| <u>✓</u>    | 8.  | Support documentation and calculations for each PRO Form: for each PRO Form include all quantification methods, emission factors, reference sources, calculations etc. Cross reference each page of calculation to the appropriate PRO Form.                 | OK |
| <u>✓</u>    | 9.  | Substances Used, Produced or Otherwise Present (S-UP) Form: for all substances on Appendix A-II. Those Appendix A-I substances that are emitted in quantities below the degree of accuracy may be listed here, but all backup calculations must be included. | OK |
| <u>    </u> | 10. | Stationary Combustion (S-CMB) Form.  |    |
| <u>    </u> | 11. | Cooling Tower (S-CT) Form.   |    |
| <u>    </u> | 12. | Metal Plating (S-MP) Form.   |    |
| <u>    </u> | 13. | Sterilization (S-ETO) Form.  |    |
| <u>✓</u>    | 14. | Source Test results and emission calculations.   | OK |
| <u>✓</u>    | 15. | Plot Plan: to scale, indicate adjacent streets & properties, all structures (and their heights) on your property, all emission points.   | OK |

MAIL REPORT TO:        SCAQMD  
                              ATTN.: TOXICS UNIT, ENGINEERING DIVISION  
                              9150 E. FLAIR DRIVE  
                              EL MONTE CA 91731

**Attachment 1**  
**Worst Case Emission Calculations**

PROJECT 1003-1

# HEWITT LANDFILL AB2588 EMISSION CALCULATIONS

01-Dec-91

FLOW AND CONCENTRATION DATA IS FROM THE APRIL 26, 1990 FLARE SOURCE TEST REPORT  
 AVE EXHAUST FLOW RATE = 12015.5 SCFM (REFERENCE APPENDIX A, PAGE 1  
 OF THE SOURCE TEST REPORT)

SUBSTANCE	FLARE ** EXHAUST CONCENTRATION PPB REF: TABLE 2-3 P6	CAS NUMBER	M.W.	Q EMISSIONS LBS/YEAR	APPLICABLE DEGREE OF ACCURACY APPENDIX A1 (LBS/YR)
1 BENZENE	<6.3	71-43-2	78.10	8.2	10
2 CHLOROBENZENE	<4.4	108-90-7	110.90	8.1	100
3 CHLOROFORM "TRICHLOROMETHANE"	<4.1	67-66-3	119.37	8.1	10
4 CARBON TETRACHLORIDE "TETRACHLORO METHANE"	<3.2	56-23-5	153.81	8.2	10
5 1,2 DICHLOROETHANE	<5.0	107-06-02	98.96	8.2	10
6 HYDROGEN SULFIDE (MEASURED AT THE FLARE INLET) *	21500	77-830-64	34.08	6.9	100
7 METHYLENE CHLORIDE "DICHLOROMETHANE"	<5.8	75-09-2	84.93	8.2	100
8 TETRACHLOROETHENE	<3.0	127-18-4	165.83	8.3	100
9 TRICHLOROETHYLENE	<3.7	79-01-6	131.38	8.1	100
10 1,1,1 TRICHLOROETHANE	<3.7	71-55-6	133.42	8.2	100
11 1,4 DICHLOROBENZENE	<3.3	106-46-7	147.00	8.1	100
12 TOLUENE	20	108-88-3	92.13	30.7	100
13 VINYL CHLORIDE	<7.9	75-01-4	62.50	8.2	100
14 TOTAL XYLENES	<6.6	1115	106.16	11.7	100
15 1,1 DICHLOROETHENE	<5.1	75-35-4	96.944	8.2	100

\* EMISSIONS ARE BASED ON 99.5% DESTRUCTION EFFICIENCY AT 2. MMSCFD LANDFILL GAS FLOW RATE  
 \*\* EMISSION CALCULATIONS ARE BASED ON WORST CASE DATA. WHERE THE GAS CONCENTRATION IS LESS THAN  
 THE DETECTION LIMITS, THE DETECTION LIMIT IS USED IN THE CALCULATIONS.

FILE NAME "A:\HEWITT\AB2588"

**Attachment 2**  
**1990 Flare Source Test Report**

C01-001-FR

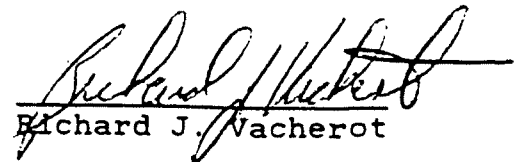
EMISSIONS FROM A  
LANDFILL GAS COLLECTION SYSTEM FLARE,  
HEWITT LANDFILL

Prepared for:

CAL MAT PROPERTIES COMPANY  
3200 San Fernando Road  
Los Angeles, CA 90065

Prepared by:

HORIZON AIR MEASUREMENT SERVICES  
996 Lawrence Drive #117  
Newbury Park, CA 91320

  
Richard J. Vacherot

May 29, 1990

Mr. George Cosby  
Cal Mat Properties Company  
3200 San Fernando Road  
Los Angeles, California 90065

Dear Mr. Cosby:

Please find enclosed two copies of the report entitled, "Emissions from a Landfill Gas Collection System Flare, Hewitt Landfill" documenting the emissions testing program conducted at the Hewitt Landfill Flare on April 26 and 27, 1990.

Sincerely,

HORIZON AIR MEASUREMENT SERVICES



Richard J. Vacherot

RV:lmg

Enclosure

## TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION	1
2. RESULTS	3
3. SAMPLING/ANALYTICAL PROTOCOLS	7
3.1 Sampling Location	7
3.1.1 Landfill Gas - Flare Inlet	7
3.1.2 Flare Outlet	8
3.2 Particulate Matter, Flow Rate, Moisture, Temperature	8
3.3 Sampling Procedures for Continuous Monitors - NO <sub>x</sub> , O <sub>2</sub> , CO and CO <sub>2</sub>	10
3.4 Methane/Total Non Methane Organics, Carbon Monoxide, and Carbon Dioxide - Flare Inlet	11
3.5 Methane and Total Non Methane Organics - Flare Outlet	12
3.6 Speciated Hydrocarbons, Hydrogen Sulfide (H <sub>2</sub> S) and C <sub>1</sub> - C <sub>3</sub> Sulfur Compounds	12
4. QUALITY CONTROL/QUALITY ASSURANCE	16
4.1 Equipment Calibration	16
4.2 Field Custody Procedures	17
4.3 Laboratory Custody Procedures	17
4.5 QA Objectives for Precision, Accuracy and Completeness	18
4.6 Data Validation	18
4.6.1 Field Data	18
4.6.2 Laboratory Data	19
4.7 Internal Quality Control Checks	19
APPENDIX A COMPUTER PRINTOUT OF RESULTS	
APPENDIX B LABORATORY DATA	
APPENDIX C FIELD DATA SHEETS	
APPENDIX D CALIBRATIONS	
APPENDIX E CHAIN-OF-CUSTODY RECORDS	

**HORIZON**

## 1. INTRODUCTION

Under Permit to Construct #164827 CAL MAT PROPERTIES COMPANY is required by the South Coast Air Quality Management District (SCAQMD) to conduct an emissions testing program on the landfill gas collection system flare located at the Hewitt Landfill, Los Angeles, California. HORIZON AIR MEASUREMENT SERVICES had been retained for this purpose. Field testing was conducted by Richard Vacherot, Robert Halk and Steve Mrazek of HORIZON. Continuous emission monitoring was conducted by Russ Logan of SCE.

The flare and landfill gas collection system description and specifications are provided in Table 1-1.

Results of the testing program are reported in Section 2 of this document. Sampling/Analytical procedures are provided in Section 3. Quality Control/Quality Assurance procedures utilized are provided in Section 4. All pertinent documentation is contained in the Appendices.

TABLE 1-1

Flare/Landfill Gas Collection System  
Description and Specifications  
Permit to Construct #164827

Legal Owners: CAL MAT PROPERTIES COMPANY  
3200 San Fernando Road  
Los Angeles, CA 90065  
Attn: R. Prosser

Equipment Location: 7245 Laurel Canyon  
Los Angeles, CA

Landfill Gas Collection System: Two landfill gas blowers B-1A and B-1B, Hauch, Model No. TBGB-9-071-271, each with a 25 Hp motor, venting forty-five (45) migration control wells.

Flare: John Zink, Model ZTOF, 8'-0" diameter x 24'-0" H, 20,000,000 Btu/hr.

Test Operating Conditions: Normal flare operating conditions - 1550° F.

## 2. RESULTS

The results of the criteria pollutant testing at the flare outlet are provided in Table 2-1. All emission rates were below the allowable limit.

Two test runs were performed for particulate matter. Upon preparation for analysis of particulate matter run #1, it was noticed that insulation material from the flare lining had inadvertently been collected in the sampling train impinger catch. Therefore, this test run was deemed unrepresentative and, although analyzed, the result from test run #1 is not reported in Table 2-1.

Results of the flare inlet and outlet testing using SCAQMD Method 25.1 and Method 25.2 TCA analyses, respectively, are reported in Table 2-2. Reported values are the average of duplicate samples. Duplicate total non methane hydrocarbon sample concentrations were within either 10% (inlet) or .5 ppm (outlet) of the reported average.

Speciated hydrocarbon and sulfur compound inlet and outlet concentrations are reported in Table 2-3.

TABLE 2-1  
Criteria Pollutant Emission Testing Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Concentration</u> (ppm,v/v)	<u>Emission Rate</u> (lb/hr)	<u>Allowable</u> (lb/hr)
Oxides of Nitrogen, as NO <sub>2</sub>	6.5	0.57	1.2
Carbon Monoxide, as CO	4.7	0.25	4.0
Reactive Organic Carbon, as CH <sub>4</sub>	1.16	0.035	2.0
Particulate Matter	0.013(gr/dscf)	1.3 <sup>a</sup>	3.6

a Based on Run #2 results. Run #1 was invalidated due to the inadvertent collection of flare insulation material in the sample train. Run #1 resulted in an emission rate of 3.55 lb/hr.

TABLE 2-2  
Total Combustion Analyses Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Inlet<sup>1</sup></u> (ppm, v/v)	<u>Outlet<sup>1</sup></u> ppm (v/v)	<u>lb/hr</u>
Total Non Methane Hydrocarbons	1,724	1.16	0.035
Methane	201,000	2.79	NA
Carbon Monoxide	100.8	NQ	NA
Carbon Dioxide	205,500	NQ	NA

1 All reported values are the average of duplicate samples.

NQ - Not Quantified

NA - Not Applicable

TABLE 2-3  
Speciated Hydrocarbon and Sulfur Compound Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Inlet<sup>1</sup></u> (ppb, v/v)	<u>Outlet<sup>1</sup></u> (ppb, v/v)
Hydrogen sulfide	21,500	NQ
C1-C3 sulfur compounds <sup>2</sup>	<400	NQ
Vinyl chloride	570	<7.9
1,1-dichloroethane	<51	<5.1
Methylene chloride	<58	<5.8
Chloroform	<41	<4.1
1,2 dichloroethane	<50	<5.0
1,1,1-trichloroethane	<37	<3.7
Benzene	2,800	<6.3
Carbon tetrachloride	<32	<3.2
Trichloroethene	.250	<3.7
Toluene	4,900	20
Tetrachloroethane	335	<3.0
Chlorobenzene	490	<4.4
Total xylenes	7,350	6.6
1,4 dichlorobenzene	450	<3.3

1. Reported values are the average of duplicate analyses. Concentrations preceded by "<" are below the detection limit reported.

2. Includes methylmercaptan, ethylmercaptan, propyl mercaptan, dimethyl sulfide and CS<sub>2</sub>.

NQ - Not quantified.

### 3. SAMPLING/ANALYTICAL PROTOCOLS

The parameters of interest and associated sampling/analytical methodology utilized, as required by Permit Condition #18, are outlined below:

<u>Parameter</u>	<u>Test Method</u>
Methane/Total Non Methane Organics	SCAQMD Method 25.1
Oxides of Nitrogen (Exhaust Only)	SCAQMD Method 100
Carbon Monoxide (Exhaust Only)	SCAQMD Method 100
Particulates (Exhaust Only)	SCAQMD Method 5.1
Hydrogen Sulfide (Inlet Only)	Whole Air/GC-Hall detection
C <sub>1</sub> - C <sub>3</sub> Sulfur Compounds (Inlet Only)	Whole Air/GC-Hall detection
Speciated Hydrocarbons	Whole Air/GC-MS
Carbon Dioxide	SCAQMD Method 100/25.1
Oxygen	SCAQMD Method 100
Nitrogen (Exhaust Only)	SCAQMD Method 100
Moisture Content (Exhaust Only)	SCAQMD Method 5.1
Flow Rate (Exhaust Only)	SCAQMD Method 5.1
Temperature (Exhaust Only)	SCAQMD Method 5.1

One, one-hour test run for each parameter was conducted simultaneously at the specified locations with the exception of particulate matter. Two, three-hour particulate test runs were conducted. The sampling locations and specific sampling/analytical procedures utilized are detailed in subsequent portions of this Section.

#### 3.1 Sampling Location

##### 3.1.1 Landfill Gas - Flare Inlet

Flare inlet samples were collected from a 3/4" NPT sample port installed in the landfill gas header between the blowers and the flare.

### 3.1.2 Flare Outlet

Flare outlet samples were collected from a location five feet downstream from the top of the flare stack and 19 feet above the flare stack base.

### 3.2 Particulate Matter, Flow Rate, Moisture, Temperature

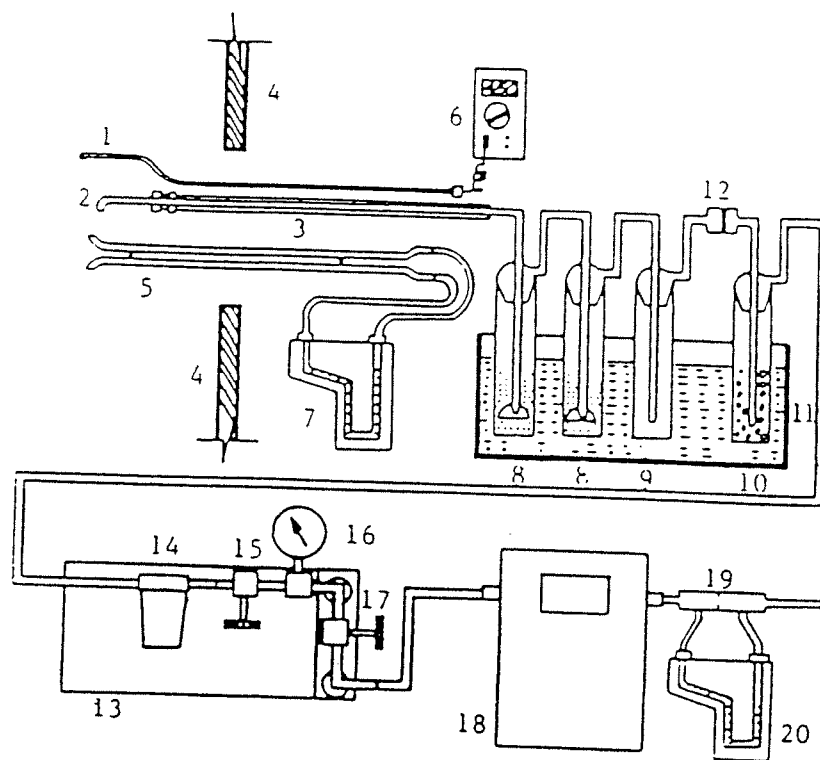
HORIZON conducted two test runs for particulate matter in accordance with SCAQMD Method 5.1 protocol.

Twelve points per each of two traverses were utilized for the collection of particulate matter. A check for cyclonic flow was conducted at the sample locations concurrent with the preliminary velocity traverse as specified in the method. Samples were withdrawn isokinetically from each of the determined traverse points.

HORIZON used a sampling train which conforms to Method 5.1 specifications as depicted in Figure 3-1. Stack gases were withdrawn through a Hastalloy C buttonhook nozzle and a Hastalloy C unheated probe followed by 3/8" OD Teflon tubing and a series of four impingers. A thermocouple and pitot tube were connected to the probe per Method 5.

The third and fourth impinger was of the modified Greenburgh-Smith design, and the first and second was a standard type. The first and second impinger contained 100 ml of DI H<sub>2</sub>O. The third impinger was empty. The last contained a preweighed amount of silica gel. An umbilical cord connected the last impinger to the flow control console containing a leakless, lubricated vane pump, dry gas meter, calibrated orifice, and a dual 0-0.25 inch H<sub>2</sub>O magnahelic.

A leak check of the pitot tube lines and sampling trains was conducted prior to and after each sampling run and prior to and after either changing any of the constituents of the train or



- |                                      |   |
|--------------------------------------|---|
| 1. Temperature Sensor                | 11. Ice Bath                              |
| 2. Nozzle                            | 12. Filter                                |
| 3. Glass Lined Stainless Steel Probe | 13. Sealed Pump (Leak Free)               |
| 4. S-type Pitot Tube                 | 14. Filter for Pump                       |
| 5. Stack Wall                        | 15. Metering Valve                        |
| 6. Temperature Sensor Meter          | 16. Vacuum Gauge                          |
| 7. Pitot Tube Inclined Manometer     | 17. By-pass Valve                         |
| 8. Impinger with 100 ml $H_2O$       | 18. Temperature Compensated Dry Gas Meter |
| 9. Empty Bubbler                     | 19. Orifice                               |
| 10. Bubbler with Silica Gel          | 20. Orifice Inclined Manometer            |

Figure 3-1

Particulate Sampling Train Setup-Wet Impingement Method

disconnecting umbilical cords to facilitate transport of the trains.

Upon completion of each sampling run, the nozzle was removed. The nozzle, probe and connective tubing was brushed and rinsed with distilled water. The filter was replaced in its original container pending analyses. The impingers and all connecting glassware was collected and rinsed with DI water.

All sample bottles and filter containers were sealed with chain-of-custody tape and all liquid levels marked.

Analyses was conducted on the probe and impinger catch fraction and filter fraction in accordance with SCAQMD Method 5.1.

### 3.3 Sampling Procedures for Continuous Monitors - NO<sub>x</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>

One 60-minute test run was conducted at the flare outlet for NO<sub>x</sub>, CO, CO<sub>2</sub> and O<sub>2</sub> using SCAQMD Method 100.1 continuous monitoring procedures. Sample was extracted through a stainless steel probe followed by a Teflon sample line using a Teflon-lined diaphragm pump. Prior to the pump, the sample gas is passed through a glass water "drop out" container followed by a 47 mm glass fiber filter contained within a stainless steel holder. The clean, dry sample gas is then transported to the continuous analyzer system through an unheated 5/8" OD Teflon line. A series of flowmeters, valves, and regulators maintain flow through the system at a constant pressure.

Calibration of the continuous analyzers are performed using certified calibrations gases ( $\pm 1\%$ ) for criteria pollutant analysis and for fixed gas analysis. All pertinent data (date, time, test locations, analyzer range, cal gas value) are recorded on both the field data sheets and the continuous analyzer strip charts in the field.

At the start of the test day, a leak-check is performed. The sample probe is removed from the stack and the end is sealed with

a Swagelok cap. A leak-check is successfully only if pressure at the analyzer system and flow through the rotometers to the individual analyzers all drop to zero. A mandatory leak-check is performed at completion of each test day.

An external calibration (sampling system bias check) of the monitoring system is performed at the beginning and end of each test day by introducing a calibration gas at the tip of the probe. The value measured by the system must agree within  $\pm 5\%$  of the certified gas value before testing can proceed.

An internal calibration is performed at the start of each test period by introducing zero and the span gas to each analyzer and making the necessary adjustments. Calibration gas values are recorded onto the continuous monitor strip charts and the field data sheets. A calibration check is completed at the end of each test run.

#### 3.4 Methane/Total Non Methane Organics, Carbon Monoxide, and Carbon Dioxide - Flare Inlet

Methane, total non methane organics, carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) samples was collected by HORIZON AIR MEASUREMENT SERVICES using the SCAQMD Method 25.1 procedures at the flare inlet.

Duplicate gas samples are withdrawn from a source at a constant rate through condensate traps immersed in dry ice followed by evacuated, 12-liter (nominal) tanks. Heavy organic components condense as liquids and solids in the condensate traps. Lighter components pass as gases through the traps into the tanks. Volatile organic compounds (VOC) as total gaseous non-methane organics (TGNMO) are determined by combining results from independent analyses of condensate in the traps and gases in the tanks. These results are used to determine a qualitative and quantitative expression of the effluent source gas stream. Duplicate sampling is designed into the system to ensure precision.

After sampling is completed, condensate traps are analyzed by first stripping carbon dioxide ( $\text{CO}_2$ ) from the trap. The organic contents are then removed and oxidized to  $\text{CO}_2$ . This  $\text{CO}_2$  is quantitatively collected in an evacuated vessel and measured by injection into the flame ionization detection/total combustion analysis (FID/TCA) system.

The organic content of the sample fraction collected in each tank is measured by injecting a portion into the FID/TCA analysis system which uses a two phase gas chromatography (GC) column to separate carbon monoxide ( $\text{CO}$ ), methane ( $\text{CH}_4$ ), and carbon dioxide ( $\text{CO}_2$ ) from each other and from the total gaseous non-methane organics (TGNMO) which are eluted as backflush. All eluted components are first oxidized to  $\text{CO}_2$  by a hopcalite catalyst and then reduced to methane by a nickel catalyst. The resulting methane is detected using the flame ionization detector.

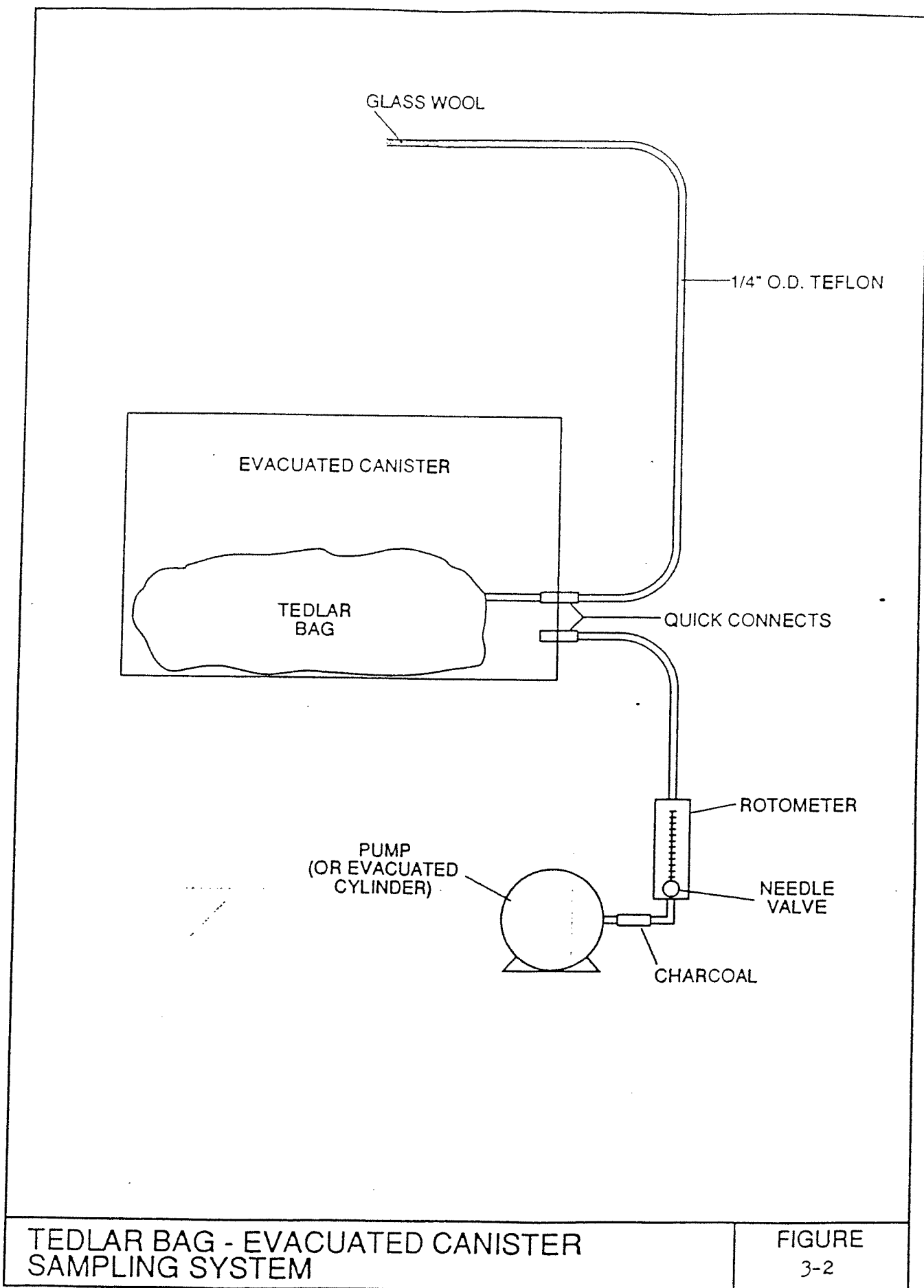
A gas standard containing  $\text{CO}$ ,  $\text{CH}_4$ ,  $\text{CO}_2$ , and propane, prepared by Scott Speciality Gases is traceable to NBS and is used to calibrate the FID/TCA analysis system.

### 3.5 Methane and Total Non Methane Organics - Flare Outlet

Methane and total non methane organics were collected at the flare outlet using SCAQMD Method 25.2 using the sampling procedure described in Section 3.6. Duplicate bag samples were analyzed using Micro - TCA procedures.

### 3.6 Speciated Hydrocarbons, Hydrogen Sulfide ( $\text{H}_2\text{S}$ ), and $\text{C}_1 - \text{C}_3$ Sulfur Compounds

Speciated hydrocarbon samples were collected at the inlet and outlet of the flare using the Tedlar bag collection system pictured in Figure 3-2. Hydrogen sulfide ( $\text{H}_2\text{S}$ ) and  $\text{C}_1 - \text{C}_3$  sulfur compounds were collected at the flare inlet only using identical procedures



as speciated hydrocarbons. One, 60-minute sample was collected simultaneously at the flare inlet and outlet.

The evacuated canister sampling system is capable of collecting an integrated, representative sample while ensuring sample integrity. The system consists of a 1/4" O.D. Teflon probe/sample line, containing glass wool to remove particulate, and a 10-liter leak-free, non-reactive Tedlar bag contained within an leak-free evacuation drum. All system components coming in contact with sample are constructed of Teflon, glass, or stainless steel.

Sample was collected by evacuating the canister at a constant rate over each test run using a rotometer/needle valve and a second 12-liter stainless steel cylinder evacuated to 30 inches of vacuum.

Prior to each sampling run, the evacuated canister (containing the Tedlar bag) was leak checked at 2" Hg vacuum. The sample train upstream of the Tedlar bag was then be purged with stack gas.

At the conclusion of each test run, each Tedlar bag sample was sealed and stored in an opaque container pending analysis.

All samples were analyzed within 48 hours of collection.

Speciated hydrocarbons were identified by GC/MS with the Table 3-1 list quantified. Hydrogen sulfide and C<sub>1</sub> - C<sub>9</sub> sulfur compounds were analyzed using Hall electrolytic conductivity detection.

TABLE 3-1

Speciated Hydrocarbons Quantification List

1. Benzene
2. Chlorobenzene
3. Dichlorobenzene
4. 1,2 Dichloroethane (Ethylene Dichloride)
5. 1,1 Dichloroethene (Vinylidene Chloride)
6. Tetrachloroethylene (Perchloroethylene)
7. Tetrachloromethane (Carbon Tetrachloride)
8. Toluene
9. 1,1,1 Trichloroethane (Methyl Chloroform)
10. Trichloroethylene
11. Trichloromethane (Chloroform)
12. Vinyl Chloride
13. Xylene
14. Methylene Chloride

#### 4. QUALITY CONTROL/QUALITY ASSURANCE

A strict quality assurance program was adhered to throughout the source sampling and analytical phases of the program.

The quality assurance program entails the calibration of all sampling and analytical apparatus where applicable and the use of control samples and replicate analyses where feasible.

##### 4.1 Equipment Calibration

The sampling equipment was calibrated at HORIZON's office before transport and recalibrated upon return. The sampling equipment was calibrated according to the EPA procedures specified in APTD-0576 and 40 CFR 60, Appendix A, and manufacturer's specifications. Calibration sheets were available prior to the initiation of the sampling program. Calibration procedures include:

- o Dry Gas Meter and Orifice Meter Method 5. The dry gas meters for all sampling trains were calibrated against a GCA/Precision wet test meter or a dry gas meter which has been calibrated against a spirometer. The orifice meters in the particulate trains were checked against the dry gas meter to which it is attached.
- o Sampling Nozzle. Each nozzle was measured with a micrometer prior to testing. The internal diameter of each sampling nozzle is measured to 0.001 inches along three points of the circumference with a dial vernier caliper. The three measurements were then averaged.
- o Balance. The analytical balance was calibrated against Class M weights by the Mettler Corporation. It is checked daily against Class S weights.
- o Thermocouples. The K-type thermocouples in the meter control box, heated sample box, impinger umbilical connector and the one attached to the probe are calibrated against ASTM mercury in glass thermometers at two points. The first point is in an ice bath and the second at the boiling point of water.
- o Pitot Tube. The "S" type Pitot tubes were designed to meet geometric configurations as defined in Method 2.

#### 4.2 Field Custody Procedures

In addition to identification labels or tags, chain of custody seals were used on samples collected by field personnel. These self-sticking seals were placed across the sample container cover/lid in such a way that the container cannot be opened without breaking the seal. The condition of the seal was noted in the Sample Bank Master Log to document whether any tampering had occurred after the sample was collected.

The chain of custody of a sample was initiated and maintained as follows:

- o A sample was collected, labeled, and sealed on appropriate samples.
- o The sample was recorded on the chain-of-custody record (COC).
- o All samples were accounted for, packed, and returned to the laboratory.

#### 4.3 Laboratory Custody Procedures

Upon return to the laboratory the samples and the COC record was turned over to the Sample Bank Manager (SBM) who:

- o Logged the sample into a large bound Master Log.
- o Noted the condition and the container type.
- o Assigned and affixed a Control Number to the sample container.
- o Initiated a page for each sample in the Custody Book and made sure that handling of the sample was documented.
- o After necessary preservation and/or subdivision, stored the samples in the refrigerated or non refrigerated section of the Sample Bank as appropriate.

All withdrawals from and returns to the Sample Bank were initiated by entry in the SAMPLE BANK TRANSACTION LOG BOOK.

#### 4.5 QA Objectives for Precision, Accuracy and Completeness

The collection of data that was used to successfully accomplish the goals outlined in this report required that the sampling and analytical procedures be conducted with properly operated and calibrated equipment by trained, experience personnel.

It is recognized that the usefulness of the data is contingent upon meeting criteria for representatives and comparability. Every effort was made to assure representatives by adhering strictly to the sampling and analytical protocols outlined. The QA objective is that all measurements be representative of the streams sampled and of the process being tested.

#### 4.6 Data Validation

Data validation is the process of filtering data and accepting or rejecting it on the basis of sound criteria. HORIZON supervisory and QC personnel used validation methods and criteria appropriate to the type of data and the purpose of the measurement. Records of all data were maintained, even that judged to be an "outlying" or spurious value. The persons validating the data have sufficient knowledge of the technical work to identify questionable values.

##### 4.6.1 Field Data

The following criteria was used to evaluate sampling data:

- o Use of approved test procedures.
- o Steady-state operation of the process being tested.
- o Use of properly operating and calibrated equipment.

- o Use of reagents that have passed QC checks.
- o Leak checks conducted before and after tests.
- o Proper chain of custody maintained.

#### 4.6.2 Laboratory Data

The following criteria was used to validate laboratory data:

- o Use of approved analytical procedure.
- o Use of properly operating and calibrated instrumentation.
- o Precision and accuracy achieved comparable to that achieved in similar analytical programs.

#### 4.7 Internal Quality Control Checks

Quality Control checks were performed to ensure the collection of representative samples by using the proper sampling techniques and the generation of valid analytical results on these samples. These checks were performed by project participants throughout the program under the guidance of the QA Task Manager and the Project Manager. HORIZON'S QC program from the sampling aspects of this program included the following:

- o Equipment Calibration - All sampling equipment (dry gas meters, pitot tubes, thermocouples, etc.) were calibrated as previously described in this QA Plan.
- o Use of Designated Sampling Forms - Sample data forms were developed for all methods and were completed by personnel collecting the sample to ensure that all pertinent information was recorded.

HORIZON quality control program for laboratory analysis made use of a number of different types of QC samples to document the validity of the generated data. The following types of QC samples were used routinely:

- o Blank Samples
  1. Field-Biased Blanks - Blank samples which have been exposed to field and sampling conditions in order to assess possible contamination from the field.
  2. Method Blanks - Blanks which are processed through the sample preparation procedures to account for contamination introduced in the laboratory. One method blank is prepared with each batch of 20 or fewer samples processed.
  3. Calibration Blanks - Blanks used in instrument calibration; these blanks contain the reagents used in preparing instrument calibration standards except the parameters of interest.
- o Duplicate Samples - A second aliquot of some samples was carried through all sample preparation and analysis procedures to verify the precision of the analytical method.

The duplicate and spiked samples or reference materials were also submitted as "blind" QC samples, those which are not recognizable to the analyst.

- o Instrument QC Checks and Frequency
  - daily calibration
  - analyze a calibration check sample after every 10 samples; reported value must be within established control limits.
- o Preparation and Analysis Procedure QC Checks and Frequency
  - method blank with each group of 20 or fewer samples
  - laboratory control sample and duplicate with each group of 20 or fewer samples

Reagents used in the laboratory are normally of analytical grade or higher purity; each lot of acid or solvent used was checked for acceptability prior to lab use.

## APPENDIX A

Computer Printout of Results

# CALMAT

LANDFILL FLARE  
PLANT: HEWITT LANDFILL  
LOCATION: NORTH HOLLYWOOD

		RUN 1	RUN 2
RUN NUMBER	*****	1	2
DATE OF RUN	*****	4-26-90	4-27-90
CLOCK TIME: INITIAL	*****	1350	810
CLOCK TIME: FINAL	*****	1700	1126
AVG. STACK TEMPERATURE	DEGREES F	1251	1339
AVG. SQUARE DELTA P	INCHES H2O	0.1463	0.1424
NOZZLE DIAMETER	INCHES	0.365	0.365
BAROMETRIC PRESSURE	IN. HG.	30.02	30.03
SAMPLING TIME	MIN.	180	192
SAMPLE VOLUME	CUBIC FEET	30.200	30.688
AVG. METER TEMP.	DEGREES F	92	83
AVG. DELTA H	IN. H2O	0.09	0.09
DGM CALIB. FACTOR [Y]	*****	1.01	1.01
WATER COLLECTED	MILLILITERS	61	53
CO 2	PERCENT	12.0	12.0
O 2	PERCENT	11.3	11.0
CO	PERCENT	0.0	0.0
N 2	PERCENT	76.7	77.0
STACK AREA	SQUARE INCHES	7238	7238 - 96"
STATIC PRESSURE	INCHES WG.	-0.05	0.20
PITOT COEFFICIENT	*****	0.84	0.84
SAMPLE VOLUME DRY	DSCF	28.836	29.797
WATER AT STD.	SCF	2.9	2.5
MOISTURE	PERCENT	9.1	7.7
MOLE FRACTION DRY GAS	*****	0.909	0.923
MOLECULAR WT. DRY	LB/LB MOLE	30.37	30.36
EXCESS AIR	PERCENT	126.27	117.92
MOLECULAR WT. WET	LB/LB MOLE	29.24	29.41
STACK GAS PRESSURE	INCHES HG.	30.02	30.04
STACK VELOCITY	AFPM	879	875
VOLUMETRIC FLOWRATE, DRY STD.	DSCFM	12246	11785
VOLUMETRIC FLOWRATE, ACTUAL	ACFM	44192	43974
ISOKINETIC RATIO	PERCENT	90	91

## CALCULATIONS FOR GRAIN LOADING AND EMISSION RATES

TOTAL PARTICULATE	mg	63.3	25.1
PARTICULATE CONCENTRATION	gr/dscf	0.034	0.013
PARTICULATE EMISSION RATE	lb/hr	3.55	1.31

# HORIZON

Date: 4/26/90

Page 1 of 1

Emissions Data - S.C.A.Q.M.D. Method 100.1

Client : Calmat  
Site : Hewlitt Landfill

Unit : Flare  
Run # : 1

Times : Beg.Cal@ 1600 Start@ 1610 Stop@ 1710 End Cal@ 1710

\*\* MEASURED EMISSIONS COMPONENTS \*\*

Source :	Out	Out	Out	Out
Component:	NOx	O2	CO	CO2
Units :	ppm	%	ppm	%

\*\* INSTRUMENT CAL RANGE, SPAN & DATA RANGE \*\*

C. Range :	100	25	100	25
Span :	84.0	10.0	68.8	10.0
D. Range :	100	25	100	25

\*\* RAW EMISSIONS DATA \*\*

1610	7	9.8	15	9.5
5	6	10.5	5	10.0
10	7	10.2	0	10.0
15	6	10.4	16	10.0
20	6	10.2	0	11.5
25	6	10.0	0	10.5
30	7	10.2	6	9.5
35	7	10.5	0	9.7
40	5	10.2	4	10.0
45	6	10.0	6	10.0
50	6	10.2	6	10.0
55	7	10.7	1	10.2
60	8	10.5	2	10.0

Raw Avg. : 6 10.3 5 10.1

Maximum : 8 10.7 16 11.5

Minimum : 5 9.8 0 9.5

\*\* CALIBRATION ADJUSTMENTS \*\*

Zero :	1.0	0.0	1	0.0
Span :	-3.0	0.0	0	0.0

\*\* DRIFT CORRECTED EMISSIONS \*\*

Average : 7 10.3 5 10.1

\*\* NOTES \*\*

HORIZONTAL

EMISSION RATES - TNMHC  
PLANT: HEWITT LANDFILL FLARE EXHAUST  
LOCATION: N. HOLLYWOOD  
TEST PROGRAM PARTICIPANTS: R. VACHEROT, S. MRAZEK, R. HALK

SAMPLE LOCATION: FLARE EXHAUST  
CONTAMINANT: VOC, CH4 16.00

RUN #		OUTLET	OUTLET
DATE		1A	1B
		4-26-90	4-26-90
SAMPLE VOLUME	standard liters		
CONTAMINANT MASS	ug		
CONCENTRATION	ug/liter	0.8566	0.6539
CONCENTRATION	ppm,v/v	1.31	1.00
VOLUMETRIC FLOWRATE	dscfm	12246	12246
EMISSION RATE	grams/second	4.95E-03	3.78E-03
EMISSION RATE	lbs/hour	3.92E-02	2.99E-02

HORIZON

CLIENT:	CALMAT
JOB NUMBER:	C01-001
SOURCE :	FLARE
FACILITY:	HEWITT LANDFILL
LOCATION:	N. HOLLYWOOD
TEST DATE:	4-26-90

Parameter	Units	Inlet	Inlet
Tank #		F	G
Trap #		F	G
Sample Tank Vol.	liters	12.460	12.460
Initial Pressure	mm Hg	4.5	4.5
Initial Temperature	K	289	289
Final Pressure	mm Hg	240	225
Final Temperature	K	289	289
Sample Volume	liters	3.92	3.67
Analysis Pressure	mm Hg	800	800
Analysis Temperature	K	289	289
Methane in Tank	ppm	198000	204000
TNMHC, Tank(noncond.)	ppm	863	812
ICV Volume	liters	2.266	2.266
ICV Final Pressure	mm Hg	800	800
ICV Final Temp.	K	289	289
CO2 in ICV	ppm	1740	1240
TNMHC, Trap(cond.)	ppm	1007	766
Stack Total TNMHC	ppm	1870	1578
Stack Total TNMHC	mg CH4/dscm	1225.8	1034.7

HORIZON

APPENDIX B

Laboratory Data



# Atmosphere Assessment Associates

21354 Nordhoff St., Suite 113, Chatsworth, CA 91311 (818) 718-6070

environmental consulting  
laboratory services

## LABORATORY ANALYSIS REPORT

CO, CH<sub>4</sub>, CO<sub>2</sub>, &  
Total Gaseous Non-Methane Organics (TGNMO) Analysis  
in Tanks and Traps by SCAQMD Method 25  
(FID/TCA)

Report Date: April 30, 1990  
P.O. No.: Verbal  
Client: Horizon  
Source Location: Hewitt Landfill  
Source Test Date: April 26, 1990  
Source ID: CALMAT

Date Received: April 26, 1990  
Date Analyzed: April 27, 1990

### FID/TCA Analysis - SCAQMD Method 25

Laboratory No.:	91160-6	91160-7
Sample ID. No.:	Tank F	Tank G

#### Tank Contents:

Final Pressure	800	800
Initial Pressure	240	225

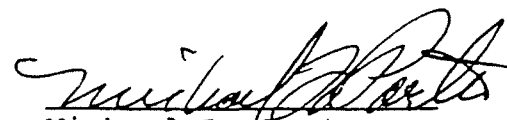
#### Component Conc.:

(ppm, v/v)

CO	99.5	102
CH <sub>4</sub>	198000	204000
CO <sub>2</sub>	203000	208000
TGNMO	863	812

Trap No.:	F	G
Transfer Tank No.:	ICV-12	ICV-9
Conc. of CO <sub>2</sub> in Transfer Tank (ppm, v/v)	1740	1240
Transfer Tank Vol.:	2.2	2.2

NOTE: Tank pressure is in mm Hg.  
TGNMO is total gaseous non-methane organics as ppm methane.  
Transfer tank volume is in liters.

  
Michael L. Porter  
Laboratory Director



# Atmosphere Assessment Associates

21354 Nordhoff St., Suite 113, Chatsworth, CA 91311 (818) 718-6070

environmental consultants  
laboratory services

## LABORATORY ANALYSIS REPORT

Methane, TGNMO &  
C<sub>1</sub>-C<sub>3</sub> Sulfur Compounds  
in Tedlar Bag Samples

Project No.: C01-001  
Site : Hewitt Landfill  
Source Test Date: April 26, 1990  
Date Received: April 27, 1990  
Date Analyzed: April 27, 1990

Methane and TGNMO are analyzed by flame ionization detection/total combustion analysis (FID/TCA), SCAQMD Method 25, analysis portion and C<sub>1</sub>-C<sub>3</sub> sulfur compounds are analyzed by Electron Capture Detection/gas chromatograph (ECD/GC).

AAA Lab No.:	91160-3	91160-4
Sample ID No.:	CM-O-1B	CM-O-1A
	4/26/90	4/26/90

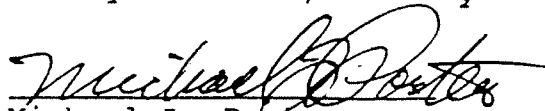
<u>Component</u>	(Concentration in ppm,v/v)	
Methane	4.58	<1
TGNMO	1.31	<1

-----

AAA Lab No.: 91160-5  
Sample ID No.: HL-I-S  
4/26/90

<u>Component</u>	(Concentration in ppm,v/v)
Hydrogen Sulfide	21.5
C <sub>1</sub> -C <sub>3</sub> Sulfur-compounds	ND

Note: ND= not detected with the lower limit of <0.4 ppm for each of the C<sub>1</sub>-C<sub>3</sub> sulfur compounds are for methylmercaptan, ethylmercaptan, propylmercaptan, dimethyl sulfide, and CS<sub>2</sub>.

  
Michael L. Porter  
Laboratory Director

QUALITY ASSURANCE SUMMARY  
(Duplicates Analyses)

P.O. No.: Verbal  
AAA Project No.: 353  
Horizon Project No.: CO1-001  
Site : Hewitt Landfill

TCA Samples

Date Received: April 26, 1990  
Date Analyzed: April 27, 1990

<u>Component</u>	<u>Sample ID</u>	<u>Duplicates Analyses</u> <u>Run #1</u> <u>Run #2</u> (concentration in ppm, v/v)		<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
CO	TK-F	99.8	99.2	99.5	0.30
CH <sub>4</sub>	TK-F	198000	198000	198000	0.0
CO <sub>2</sub>	TK-F	204000	202000	203000	0.49
TGNMO	TK-G	768	856	812	5.4
CO <sub>2</sub> (in trap, transfer tanks)	ICV-9 (TK G)	1230	1260	1240	1.2

TGNMO is total gaseous non-methane organics reported as ppm methane.

A set of 2 TCA samples, laboratory numbers 91160-(6-7) was analyzed for CO, methane, carbon dioxide, and TGNMO. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicates analyses are an important part of Atmosphere Assessment Associates' quality assurance program. The average % Difference from Mean for 5 duplicate measurements from the sample set of 2 samples is 1.5%.

Gas standards (containing CO, methane, carbon dioxide, and propane) used for TCA analyses, were prepared and certified by Scott Specialty Gases.



QUALITY ASSURANCE SUMMARY  
(Duplicates Analyses)

P.O. No.: Verbal  
AAA Project No.: 353  
Horizon Project No.: C01-001  
Site : Hewitt Landfill

Tedlar Bag Samples

Date Received: April 26, 1990  
Date Analyzed: April 27, 1990

<u>Component</u>	<u>Sample ID</u>	<u>Duplicates Analyses</u>		<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
		<u>Run #1</u>	<u>Run #2</u>		
(concentration in ppm, v/v)					
CH <sub>4</sub>	CM-O-1A	<1	<1	---	---
TGNMO	CM-O-1A	<1	<1	---	---
H <sub>2</sub> S	HL-I-S	21.4	21.6	21.5	0.46
C <sub>1</sub> -C <sub>3</sub> Sulfur compounds	HL-I-S	<0.4	<0.4	---	---

TGNMO is total gaseous non-methane organics reported as ppm methane.

A set of 3 Tedlar bag samples, laboratory numbers 91160-(3-5) was analyzed for methane, TGNMO, hydrogen sulfide, and C<sub>1</sub>-C<sub>3</sub> Sulfur compounds. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicates analyses are an important part of Atmosphere Assessment Associates' quality assurance program. The average % Difference from Mean for one duplicate measurement from the sample set of 3 samples is 0.46%.

Gas standards (containing CO, methane, carbon dioxide, and propane) used for TCA analyses, were prepared and certified by Scott Specialty Gases.





Performance Analytical Inc.  
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services

Client Sample ID: CM-0-1A-GC/MS

PAI Sample ID: 9001641

Test Code: GC/MS EPA T0-14  
Analyst: Michael Tuday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 1.0 Liters

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	ND	20	ND	7.9
75-35-4	1,1-DICHLOROETHENE	ND	20	ND	5.1
75-09-2	METHYLENE CHLORIDE	TR 18	20	TR 5.2	5.8
67-66-3	CHLOROFORM	ND	20	ND	4.1
107-06-2	1,2-DICHLOROETHANE	ND	20	ND	5.0
71-55-6	1,1,1-TRICHLOROETHANE	ND	20	ND	3.7
71-43-2	BENZENE	ND	20	ND	6.3
56-23-5	CARBON TETRACHLORIDE	ND	20	ND	3.2
79-01-6	TRICHLOROETHENE	ND	20	ND	3.7
108-80-5	TOLUENE	70	20	19	5.3
127-18-4	TETRACHLOROETHENE	TR 3.1	20	TR 0.5	3.0
108-90-7	CHLOROBENZENE	ND	20	ND	4.4
1330-20-7	TOTAL XYLENES	28	20	6.5	4.6
106-46-7	1,4-DICHLOROBENZENE	ND	20	ND	3.3

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit



Performance Analytical Inc.  
Environmental Testing and Analysis

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services  
Client Sample ID: CM-1-GC/MS  
PAI Sample ID: 9001640

Test Code: GC/MS EPA TO-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 100 mL

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	1300	200	510	79
75-35-4	1,1-DICHLOROETHENE	ND	200	ND	51
75-09-2	METHYLENE CHLORIDE	ND	200	ND	58
67-66-3	CHLOROFORM	TR 48	200	TR 9.9	41
107-06-2	1,2-DICHLOROETHANE	ND	200	ND	50
71-55-6	1,1,1-TRICHLOROETHANE	ND	200	ND	37
71-43-2	BENZENE	8400	200	2600	63
56-23-5	CARBON TETRACHLORIDE	ND	200	ND	32
79-01-6	TRICHLOROETHENE	1300	200	240	37
108-80-5	TOLUENE	18000	200	4800	53
127-18-4	TETRACHLOROETHENE	2200	200	330	30
108-90-7	CHLOROBENZENE	2100	200	460	44
1330-20-7	TOTAL XYLENES	30000	200	6900	46
106-46-7	1,4-DICHLOROBENZENE	2500	200	420	33

ND - Not Detected

TR - Trace Level; Below Indicated Detection Limit



Performance Analytical Inc.  
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services  
Client Sample ID: CM-1-GC/MS LABORATORY DUPLICATE  
PAI Sample ID: 9001640D

Test Code: GC/MS EPA T0-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 100 mL

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	1600	200	630	79
75-35-4	1,1-DICHLOROETHENE	ND	200	ND	51
75-09-2	METHYLENE CHLORIDE	ND	200	ND	58
67-66-3	CHLOROFORM	TR 57	200	TR 12	41
107-06-2	1,2-DICHLOROETHANE	ND	200	ND	50
71-55-6	1,1,1-TRICHLOROETHANE	ND	200	ND	37
71-43-2	BENZENE	9500	200	3000	63
56-23-5	CARBON TETRACHLORIDE	ND	200	ND	32
79-01-6	TRICHLOROETHENE	1400	200	260	37
108-80-5	TOLUENE	19000	200	5000	53
127-18-4	TETRACHLOROETHENE	2300	200	340	30
108-90-7	CHLOROBENZENE	2400	200	520	44
1330-20-7	TOTAL XYLENES	34000	200	7800	46
106-46-7	1,4-DICHLOROBENZENE	2900	200	480	33

ND - Not Detected

TR - Trace Level; Below Indicated Detection Limit



Performance Analytical Inc.  
Environmental Testing Laboratory

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services  
Client Sample ID: CM-0-1A-GC/MS LABORATORY DUPLICATE  
PAI Sample ID: 9001641D

Test Code: GC/MS EPA T0-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 1.0 Liters

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	ND	20	ND	7.9
75-35-4	1,1-DICHLOROETHENE	ND	20	ND	5.1
75-09-2	METHYLENE CHLORIDE	20	20	5.8	5.8
67-66-3	CHLOROFORM	ND	20	ND	4.1
107-06-2	1,2-DICHLOROETHANE	ND	20	ND	5.0
71-55-6	1,1,1-TRICHLOROETHANE	ND	20	ND	3.7
71-43-2	BENZENE	ND	20	ND	6.3
56-23-5	CARBON TETRACHLORIDE	ND	20	ND	3.2
79-01-6	TRICHLOROETHENE	ND	20	ND	3.7
108-80-5	TOLUENE	78	20	21	5.3
127-18-4	TETRACHLOROETHENE	TR 2.3	20	TR 0.3	3.0
108-90-7	CHLOROBENZENE	ND	20	ND	4.4
1330-20-7	TOTAL XYLENES	29	20	6.7	4.6
106-46-7	1,4-DICHLOROBENZENE	ND	20	ND	3.3

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit

# CALCULATION SHEET

PAGES	PAGE
TEST NO. Flare Outlet Run 1	DATE 4-26/90
PROCESSED BY MTZ	CHECKED BY [Signature]

## LAB ANALYSIS

A. Filter Catch	1.3	mg
B. (1) Filter Acid		mg
(2) Filter Total Sulfate		mg
C. Probe Catch		mg
D. (1) Probe Acid		mg
(2) Probe Total Sulfate		mg
E. Impinger Catch		mg
F. (1) Impinger Acid	57.4	mg
(2) Impinger Total Sulfate		mg
G. Organic Extract		mg
H. H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble	4.6	mg
I. Particulate Train Corrected Gas Volume Metered		mg
J. SO <sub>x</sub> Train Corrected Gas Volume Metered		dscf
K. Proxated H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O Mass ( $\frac{H \times I}{J}$ )		dscf
		mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A-B+C-D+E-F+G+K)		mg
M. Solid Particulate (L-G-K)		mg
N. Total Particulate (Corrected for Ammonium Sulfate)		mg
(A-B+C-D+E-F(1)+G+K)-(F(2)-(1)) $\frac{132}{134}$		mg
O. Solid Particulate (Corrected for Ammonium Sulfate)		mg
(N-G-J)		mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F+G)	63.3	mg
Q. Solid Particulate (P-B*-D*-G)	58.7	mg
R. Total Particulate (Corrected for Ammonium Sulfate)		mg
(A+C+E-F(1)+G)-(F(2)-F(1)) $\frac{132}{134}$		mg
S. Solid Particulate (Corrected for Ammonium Sulfate)		mg
(R-B*-D*-G)		mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

# CALCULATION SHEET

PAGES	PAGE
TEST NO. Flare Outlet Run 2	DATE 4-27/90
PROCESSED BY MTZ	CHECKED BY [Signature]

## LAB ANALYSIS

A. Filter Catch	0.0	mg
B. (1) Filter Acid		mg
(2) Filter Total Sulfate		mg
C. Probe Catch		mg
D. (1) Probe Acid		mg
(2) Probe Total Sulfate		mg
E. Impinger Catch		mg
F. (1) Impinger Acid	22.6	mg
(2) Impinger Total Sulfate		mg
G. Organic Extract		mg
H. H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble	2.5	mg
I. Particulate Train Corrected Gas Volume Metered		dscf
J. SO <sub>x</sub> Train Corrected Gas Volume Metered		dscf
K. Proxated H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O Mass ( $\frac{H \times I}{J}$ )		mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A+B+C-D+E-F+G+K)		mg
M. Solid Particulate (L-G-K)		mg
N. Total Particulate (Corrected for Ammonium Sulfate)		mg
(A-B+C-D+E-F(1)+G+K-[F(2)-(1)] $\times \frac{132}{134}$ )		mg
O. Solid Particulate (Corrected for Ammonium Sulfate)		mg
(N-G-J)		mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F+G)	25.1	mg
Q. Solid Particulate (P-B-D+G)	22.6	mg
R. Total Particulate (Corrected for Ammonium Sulfate)		mg
(A+C+E-F(1)+G-[F(2)-F(1)] $\times \frac{132}{134}$ )		mg
S. Solid Particulate (Corrected for Ammonium Sulfate)		mg
(R-B-D+G)		mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

# CALCULATION SHEET

PAGES	PAGE
TEST NO. <i>Extraction Blank</i>	DATE <i>5-8-90</i>
PROCESSED BY <i>MTZ</i>	CHECKED BY <i>[Signature]</i>

## LAB ANALYSIS

A. Filter Catch .....	_____	mg
B. (1) Filter Acid .....	_____	mg
(2) Filter Total Sulfate .....	_____	mg
C. Probe Catch .....	_____	mg
D. (1) Probe Acid .....	_____	mg
(2) Probe Total Sulfate .....	_____	mg
E. Impinger Catch .....	_____	mg
F. (1) Impinger Acid .....	<i>- 0.7</i>	mg
(2) Impinger Total Sulfate .....	_____	mg
G. Organic Extract .....	<i>3.4</i>	mg
H. H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble .....	_____	mg
I. Particulate Train Corrected Gas Volume Metered .....	_____	dscf
J. SO <sub>x</sub> Train Corrected Gas Volume Metered .....	_____	dscf
K. Pro-rated H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O Mass ( $\frac{H \times I}{J}$ ) .....	_____	mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A-B*+C-D*+E-F*+G+K) .....	_____	mg
M. Solid Particulate (L-G-K) .....	_____	mg
N. Total Particulate (Corrected for Ammonium Sulfate) (A-B*+C-D*+E-F(1)+G+K-[F(2)-(1)] $\times \frac{132}{134}$ ) .....	_____	mg
O. Solid Particulate (Corrected for Ammonium Sulfate) (N-G-J) .....	_____	mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F*+G) .....	<i>2.7</i>	mg
Q. Solid Particulate (P-B*-D*-G) .....	_____	mg
R. Total Particulate (Corrected for Ammonium Sulfate) (A+C+E-F(1)+G-[F(2)-F(1)] $\times \frac{132}{134}$ ) .....	_____	mg
S. Solid Particulate (Corrected for Ammonium Sulfate) (R-B*-D*-G) .....	_____	mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

APPENDIX C

Field Data Sheets

1A 10 000 111

—y:nyll:—

521	000
-----	-----

505	571	1201
-----	-----	------

--	--

--	--

SHICA

734
-----

261.9	273.2	11.3
-------	-------	------

[illegible]

trial	✓	2015" Hg - 0.020
-------	---	------------------

FINAL 3/27/83 5" Hgt. 0.10

INITIAL 8101 ✓ - OK





2002

... and ...

Abhandlung: Witten

OMG

FILTER DATA

NUMBER	TARE	FINAL
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		
100		

65-	
-----	--

--	--	--	--

--	--	--

[illegible]

# METHOD 2 GAS VELOCITY AND VOLUME DATA FORM

PLANT Howitt Landfill

DATE 4-26-90

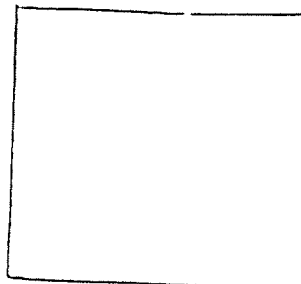
RUN NO. INITIAL TRAVERSE

STACK DIAMETER, in. 96"

BAROMETRIC PRESSURE, in. Hg. 30.04

STATIC PRESSURE IN STACK ( $P_s$ ), in. Hg. 8

OPERATORS RRK, SJM, RV



SCHEMATIC OF STACK  
CROSS SECTION

## Field data

Traverse point number	Position, in.	Velocity head ( $\Delta p_s$ ), in. $H_2O$	Stack temp., °F	Cyclonic flow determination	
				$\Delta p_s$ at 0° reference	Angle ( $\alpha$ ) which yields a null $\Delta p$
A-1	2.02	0.005	1410		<5
2	6.43	0.005			<5
3	11.33	0.005			<5
4	16.99	0.017			<5
5	24.0	0.017			<5
6	34.18	0.020			<5
7	61.82	0.015			<5
8	72.00	0.015			<5
9	79.00	0.020			<5
10	84.67	0.025			<5
11	89.57	0.025			<5
12	93.98	0.025			<5
B-1		0.005			<5
2		0.010			<5
3		0.010			<5
4		0.015			<5
5		0.017			<5
6		0.020			<5
7		0.020			<5
8		0.017			<5
9		0.017			<5
10		0.010			<5
11		0.010			<5
12		0.010			<5
Average angle ( $\alpha$ )					

TOTAL COMBUSTION ANALYSIS  
SCAQMD METHOD 25  
FIELD SAMPLING DATA SHEET

Job #: 101-001  
Facility: Hewlett Landfill  
Location: North Hollywood  
Date: 4/26/90  
Operator: RV/RH/SSM

Control Device: Flare  
Sample Location: Inlet  
Ambient Temperature: 85  
Barometric Pressure: \_\_\_\_\_

SAMPLE A

Tank #: F Trap #: F  
Initial Vacuum: 4.5 mm Hg  
Final Vacuum: 240  
ANALYSIS PRESSURE 800

TIME	VACUUM ("Hg)	FLOW (cc/min)
0	30	72
5	29	72
10	28	72
15	27	72
20	26	72
25	25	72
30	24	72
35	23	72
40	22	72
45		

SAMPLE B

Tank #: G Trap #: G  
Initial Vacuum: 4.5 mm Hg  
Final Vacuum: 225  
800

TIME	VACUUM ("Hg)	FLOW (cc/min)
1654 0	30	72
5	29	72
10	26	72
15	25	72
20	24	72
25	24	72
30	23	72
35	22	72
40	21	72
45		

Leak Rate Pre Test: OK

Post Test: \_\_\_\_\_

HORIZON

## INTEGRATED BAG SAMPLING DATA FORM

Run number 1A & B outlet

Date 4-15-90

Plant HEWLETT LANDFILL

Sampling location OUTLET OF FLARE

Barometric pressure 30.04

Ambient temp. °C 85 Stack temp. °C 1300

Operator RRLH

[illegible]

2

$$\% \text{ Dev.} = \left( \frac{Q - Q_{avg}}{Q_{avg}} \right) 100; \text{ must be } \leq 10\%.$$

## INTEGRATED BAG SAMPLING DATA FORM

Run number 1A0B In1C7

Date 4-15-90

Plant NEWLETT LANDFILL

Sampling location Hewlett Landfill - Inlet - Flare

Barometric pressure 30.04

Ambient temp. °C 85

Stack temp. °C 

Operator RZH, SSM, KU

		Rate meter flow, rate ( $\dot{Q}$ ), $\text{cm}^3/\text{min}$	% Dev. <sup>a</sup>
Time	Traverse point		
1605	INLET	100 CC	
10		100 CC	
20		100 CC	
30		100 CC	
stop 40		100 CC	
50		100 CC	
60		100 CC	
		Avg =	

2

$$\% \text{ Dev.} = \left( \frac{Q - Q_{avg}}{Q_{avg}} \right) 100; \text{ must be } \leq 10\%.$$

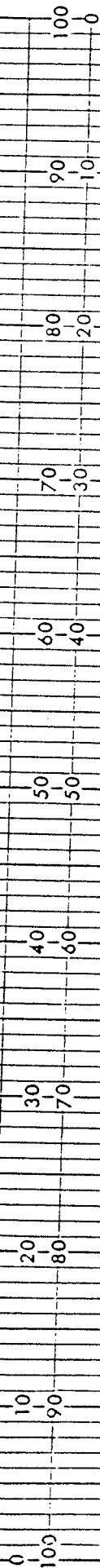
HORIZON FLARE TEST

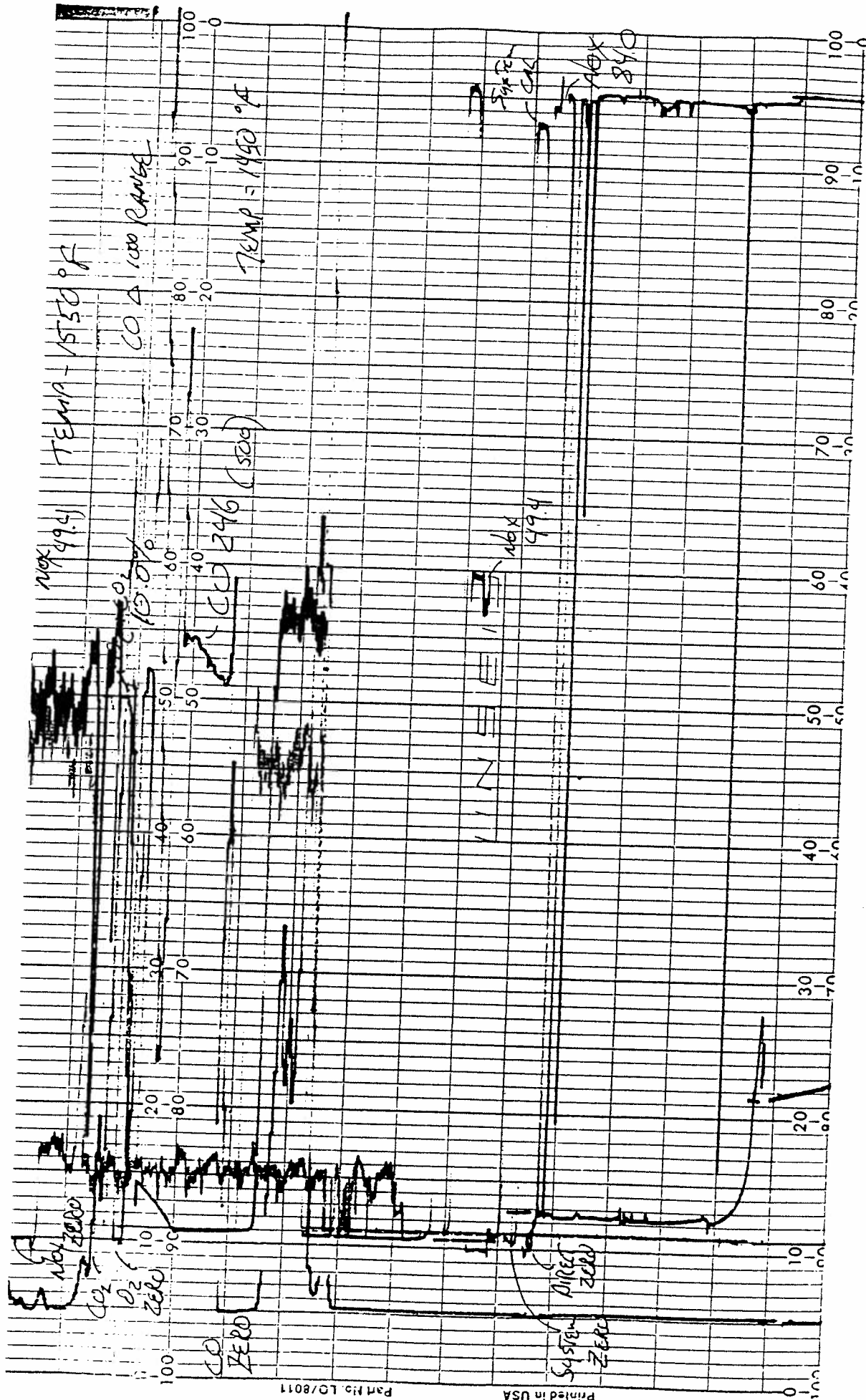
TN59

4-26-90 @ CAL MAT NORTH HOLLEYWOOD

5:00 PM

10:05

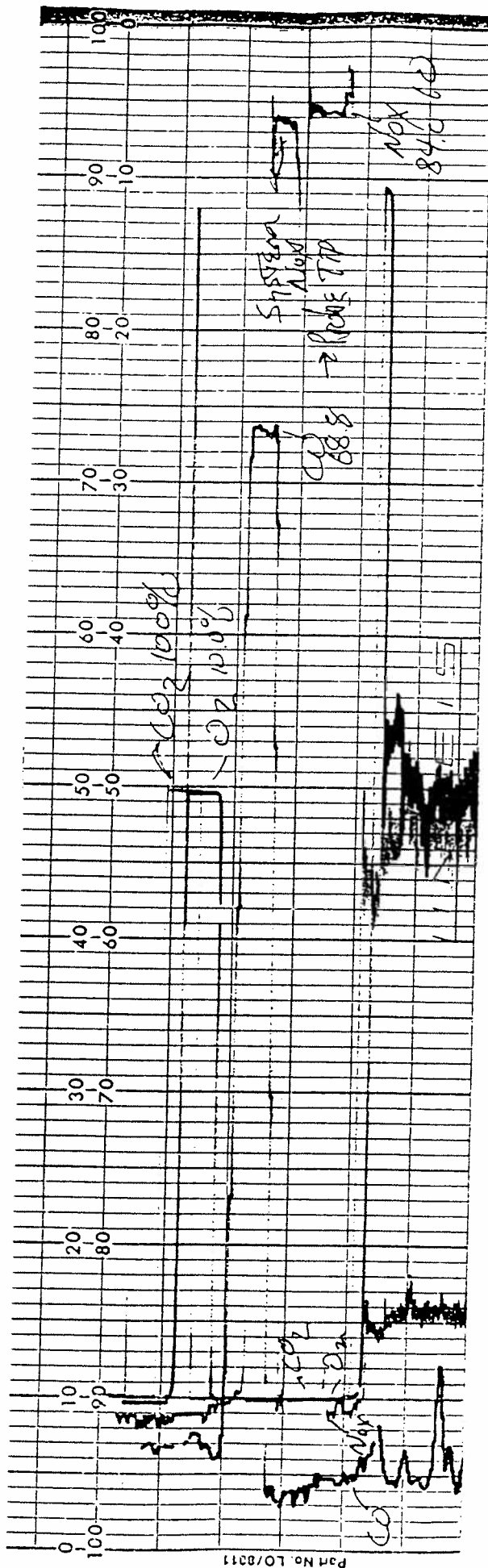




Part No. LO/8011

Printed in USA





Date: 4-26-90

Page 2 of 2

## Continuous Emissions Monitoring - C.A.R.B. Method 1-100

Client : CALMAT  
Site : NEWITT LAND FILLUnit : FLARE  
Run # : 1Times : Beg. Cal @ 1600 Start @ 1610 Stop @ 1710 End Cal @ 1710

## \*\* MEASURED EMISSIONS COMPONENTS \*\*

Component:	In NOx	In O2	Out NOx	Out O2	Out CO	Out CO2	Conversion Efficiency (In-Out) / In NOx @ 15% O2
Units :	ppm	%	ppm	%	ppm	%	

## \*\* INSTRUMENT CAL RANGE, SPAN &amp; DATA RANGE \*\*

C. Range :	<u>100</u>	<u>100</u>	<u>25</u>	<u>100</u>	<u>25</u>
Span :	<u>84.6</u>	<u>10</u>	<u>68.8</u>	<u>10</u>	<u>10</u>
D. Range :	<u>100</u>	<u>100</u>	<u>25</u>	<u>100</u>	<u>25</u>

## \*\* RAW EMISSIONS DATA \*\*

1610	0		7	9.75	15	9.5
	5		6	10.5	5	10.0
	10		7	10.2	0	10.0
	15		6	10.4	16	10.0
	20		6	10.2	0	11.5
	25		6	10.0	0	10.5
	30		7	10.2	6	9.5
	35		7	10.5	0	9.7
	40		5	10.2	4	10.0
	45		6	10.0	6	10.0
	50		6	10.2	6	10.0
	55		7	10.7	1	10.2
1710	60		8	10.5	2	10.0
Raw Avg. :			6.5	10.2	4.7	10.1
Maximum :			8	10.7	16	11.5
Minimum :			5	9.75	0	9.5

## \*\* CALIBRATION ADJUSTMENTS \*\*

Zero :		+1	0	+1	0
Span :		-3	0	0	0
Span Set :					

## \*\* DRIFT CORRECTED EMISSIONS \*\*

Average : \_\_\_\_\_

## \*\* NOTES \*\*

$$DCAvg = (RawAvg + (ZeroAdj/2) * (DataRng/CalRng)) * (1 + (SpanAdj/(2 * CalSpan)))$$

APPENDIX D  
Calibrations

# Control Box Calibration Data

Date: 3/21/90  
 Meter Box Number 2  
 Orifice Number: 994  
 DGM Number: N/A

Calibrated by: R. Halk  
 Barometric Pressure: 30.03

Orifice setting (H)	Gas Volumes			Temperatures			Time (min)	Y	
	Wet Test (cu.ft)	Dry Gas Initial (cu.ft)	Dry Gas Final (cu.ft)	DGM Initial (F)	DGM final (F)	WTM (F)			
0.5	7.50	38.800	46.401	97	99	74	17.88	1.0298	1.
1	8.10	46.600	55.100	97	99	74	14.53	0.9933	1.
1.5	11.40	55.300	67.202	98	99	74	17.05	0.9981	1.
2	11.83	67.420	79.688	99	101	74	15.32	1.0063	1.
3	10.88	80.000	91.245	99	102	74	11.45	1.0082	1.
AVERAGE								1.0069	1.1

Calibrated by: Robert B. Halk  
 Reviewed by: J. Mrazek

HORIZON

# Thermocouple Calibration Data

Date: 3/21/90  
 Calibrated by: R. Halk  
 Barometric Pressur 30.03

Termocouple ID	Ice Water		Amb ient		Boiling Water		Other
	reference	Tc	reference	Tc	reference	Tc	reference
FB-1	33	35	72	72	212	210	225
FB-2	33	35	72	71	212	211	225
IMP-1	33	35	72	72	212	-	
IMP-2	33	33	72	72	212	-	
DGM-1 inlet	33	34	72	73	212	210	
DGM-1 outlet	33	35	72	72	212	213	
DGM-2 outlet	33	33	72	71	212	215	
DGM-2 inlet	33	34	72	71	212	213	
Stack #3 - 1	33	36	72	73	212	211	
Stack #5 - 1	42	42	72	70	212	210	

\* Heated Filter Box

Calibrated by: \_\_\_\_\_

HORIZON

OLD TO: *Horizon air measurement*

COMPANY

P.O. NO.

S.O. NO.

DA

2.1 Type 8 Pitot Tube. The Type 8 pitot tube (Figure 2-6) shall be made of metal tubing (e.g., stainless steel). It is recommended that the external tubing diameter (dimension  $D_t$ , Figure 2-2b) be between 0.48 and 0.95 centimeters ( $\frac{3}{16}$  and  $\frac{3}{8}$  inch). There shall be an equal distance from the base of each leg of the pitot tube to its face opening plane (dimensions  $P_1$  and  $P_2$ , Figure 2-2b); it is recommended that this distance be between 1.05 and 1.50 times the external tubing diameter. The face openings of the pitot tube shall, preferably, be aligned as shown in Figure 2-7; however, slight misalignments of the openings are permissible (see Figure 2-3).

The Type 8 pitot tube shall have a known coefficient, determined as outlined in Section 4. An identification number shall be stamped to the pitot tube; this number shall be permanently marked or engraved on the body of the tube.

## 4. Calibration

4.1 Type 8 Pitot Tube. Before its initial use, carefully examine the Type 8 pitot tube in top, side, and end views to verify that the face openings of the tube are aligned within the specifications illustrated in Figure 2-2 or 2-3. The pitot tube shall not be used if it fails to meet these alignment specifications.

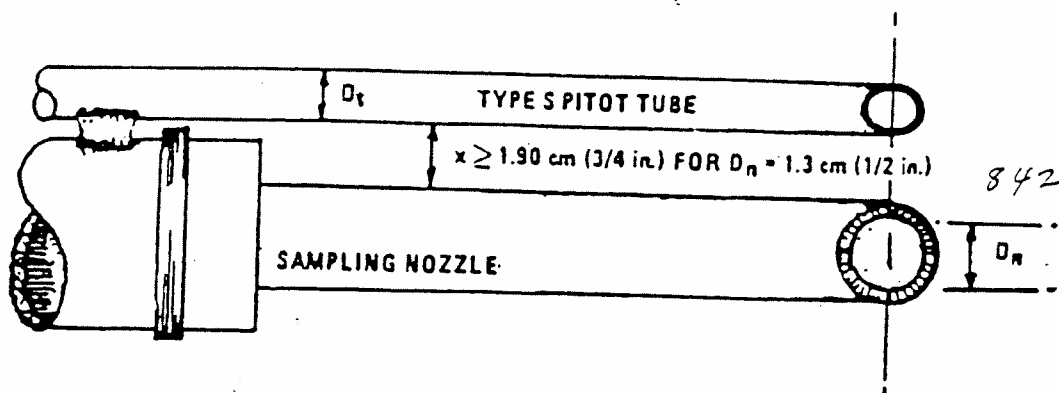
After verifying the face opening alignment, measure and record the following dimensions of the pitot tube:

(a) the external tubing diameter (dimension  $D_t$ , Figure 2-2b); and (b) the base-to-opening plane distances (dimensions  $P_1$  and  $P_2$ , Figure 2-2b). If  $D_t$  is between 0.48 and 0.95 cm ( $\frac{3}{16}$  and  $\frac{3}{8}$  in.) and if  $P_1$  and  $P_2$  are equal and between 1.05 and 1.50  $D_t$ , there are two possible options: (1) the pitot tube may be calibrated according to the procedure outlined in Sections 4.1.2 through 4.1.3 below, or (2) a baseline (isolated tube) coefficient value of 0.84 may be assigned to the pitot tube. Note, however, that if the pitot tube is part of an assembly, calibration may still be required, despite knowledge of the baseline coefficient value (see Section 4.1.1). If  $D_t$ ,  $P_1$ , and  $P_2$  are outside the specified limits, the pitot tube must be calibrated as outlined in 4.1.2 through 4.1.3 below.

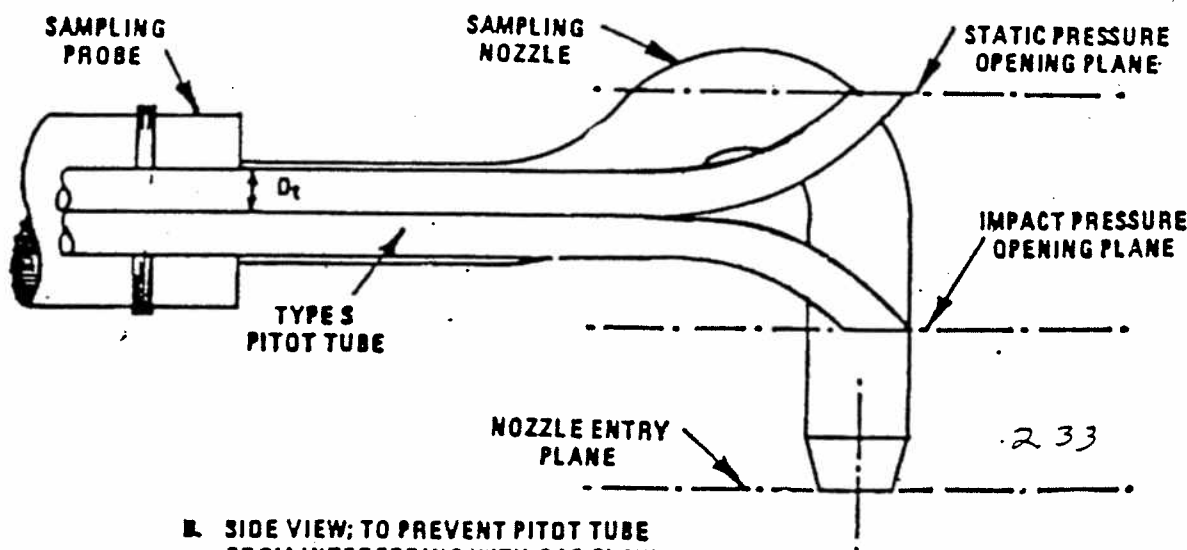
4.1.1 Type 8 Pitot Tube Assemblies. During sample and velocity traverses, the isolated Type 8 pitot tube is not always used; in many instances, the pitot tube is used in combination with other source-sampling components (thermocouple, sampling probe, nozzle) as part of an "assembly." The presence of other sampling components can sometimes affect the baseline value of the Type 8 pitot tube coefficient (Citation 9 in Section 6); therefore an assigned (or otherwise known) baseline coefficient

value may or may not be valid for a given assembly. The baseline and assembly coefficient values will be identical only when the relative placement of the components in the assembly is such that aerodynamic interference effects are eliminated. Figures 2-4 through 2-8 illustrate interference-free component arrangements for Type 8 pitot tubes having external tubing diameters between 0.48 and 0.95 cm ( $\frac{3}{16}$  and  $\frac{3}{8}$  in.). Type 8 pitot tube assemblies that fail to meet any or all of the specifications of Figures 2-4 through 2-8 shall be calibrated according to the procedure outlined in Sections 4.1.2 through 4.1.3 below, and prior to calibration, the values of the inter-component spacings (pitot-cozzle, pitot-thermocouple, pitot-probe sheath) shall be measured and recorded.

NOTE.—Do not use any Type 8 pitot tube assembly which is constructed such that the impact pressure opening plane of the pitot tube is below the entry plane of the cozzle (see Figure 2-6b).



A. BOTTOM VIEW; SHOWING MINIMUM PITOT-NOZZLE SEPARATION.



B. SIDE VIEW; TO PREVENT PITOT TUBE FROM INTERFERING WITH GAS FLOW STREAMLINES APPROACHING THE NOZZLE, THE IMPACT PRESSURE OPENING PLANE OF THE PITOT TUBE SHALL BE EVEN WITH OR ABOVE THE NOZZLE ENTRY PLANE.

Figure 2-6. Proper pitot tube - sampling nozzle configuration to prevent aerodynamic interference; buttonhook - type nozzle; centers of nozzle and pitot opening aligned;  $D_t$  between 0.48 and 0.95 cm ( $\frac{3}{16}$  and  $\frac{3}{8}$  in.).

SERIAL # 393  
5-4-90

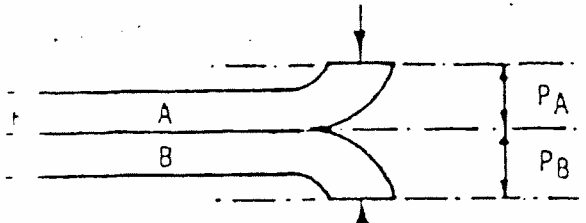
TYPE S PITOT TUBE INSPECTION DATA FORM

Tubing diameter,  $D_t$  \_\_\_\_\_ in.

Pitot Tube Assembly Level? Yes / No

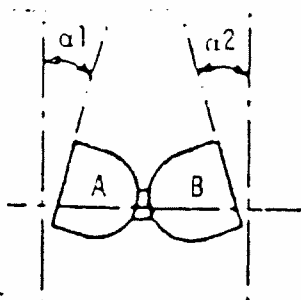
Pitot Tube Openings Damaged? Yes / No

A-SIDE PLANE

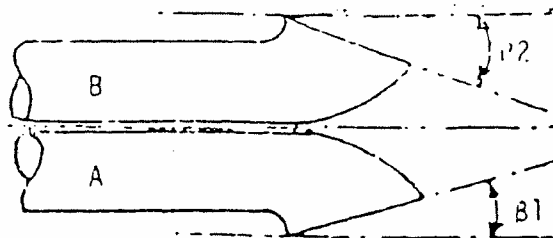


NOTE:

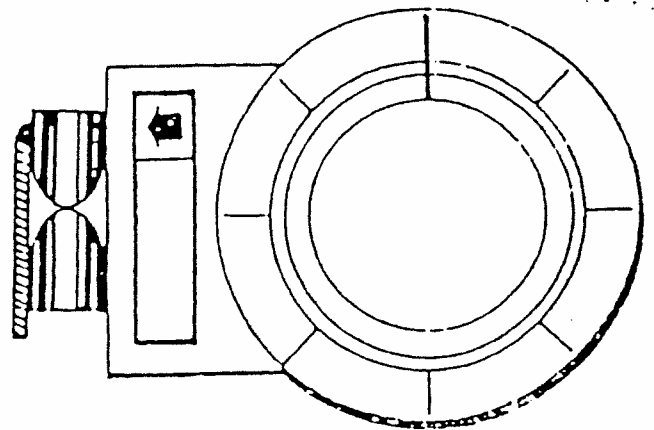
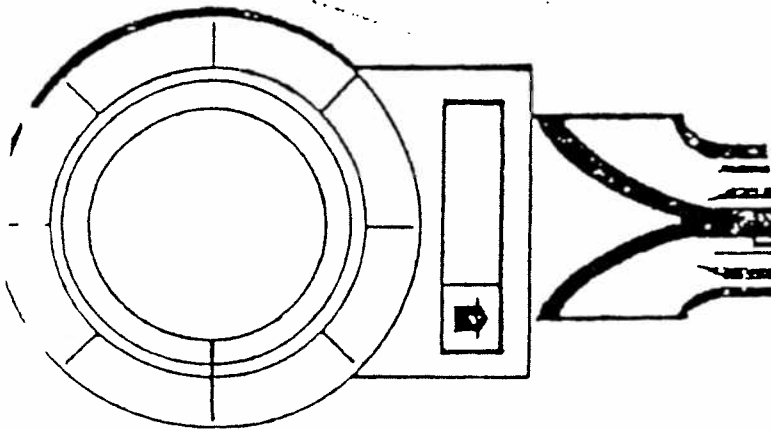
$$\begin{cases} 1.05 D_t < P < 1.50 D_t \\ P_A = P_B \end{cases} \quad \begin{aligned} P_A &= .517 \text{ in.} \\ P_B &= .526 \text{ in.} \end{aligned}$$



$$\begin{aligned} \alpha_1 &= 1^\circ \\ \alpha_2 &= 1^\circ \\ &(< 10^\circ) \end{aligned}$$



$$\begin{aligned} \beta_1 &= 0^\circ \\ \beta_2 &= 0^\circ \\ &(< 5^\circ) \end{aligned}$$



Level Position to Find  $\gamma$

$$Z = A \sin \gamma \quad \phi \text{ in. } (< 1/8 \text{ in.})$$

Level Position to find  $\theta$

$$W = A \sin \theta \quad \phi \text{ in. } (< 1/32 \text{ in.})$$

Comments pitot for probe #1

Checked by: RIZH

Date: 5-4-90

Calibration Required? POST

pitot tube  
SERIAL # 394

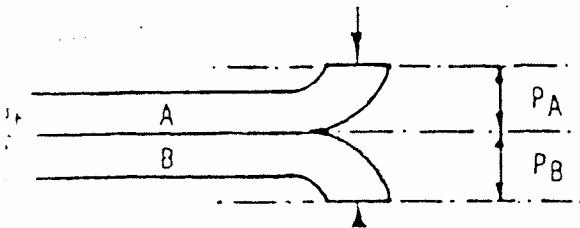
# TYPE S PITOT TUBE INSPECTION DATA FORM

Tubing diameter,  $D_t$  \_\_\_\_\_ in.

Pitot Tube Assembly Level? Yes / No

Pitot Tube Openings Damaged? Yes / No

A-SIDE PLANE

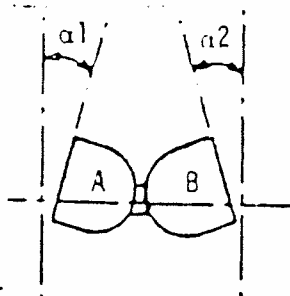


NOTE:

$$\left\{ \begin{array}{l} 1.05 D_t < P < 1.1 D_t \\ P_A = P_B \end{array} \right.$$

$P_A = .526$  in.

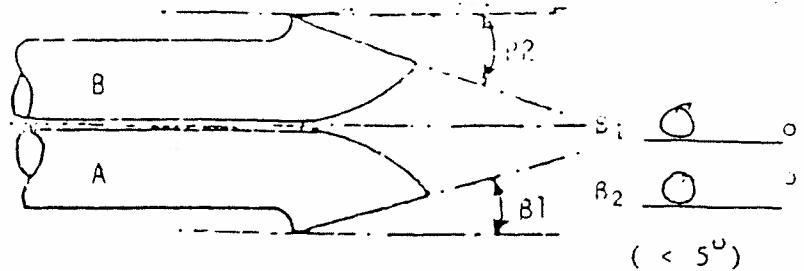
$P_B = .521$  in.



$\alpha_1 = 1^\circ$

$\alpha_2 = 0^\circ$

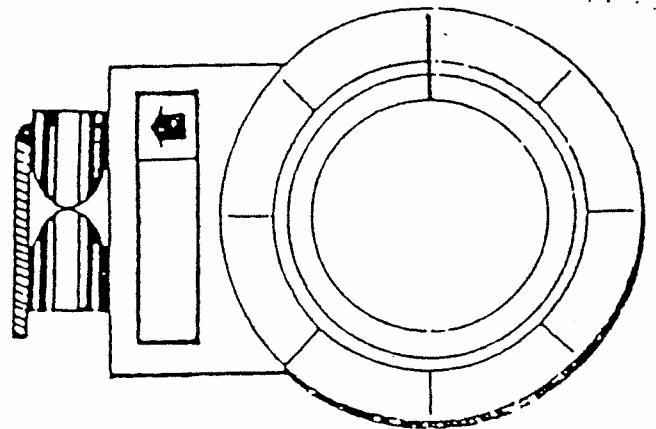
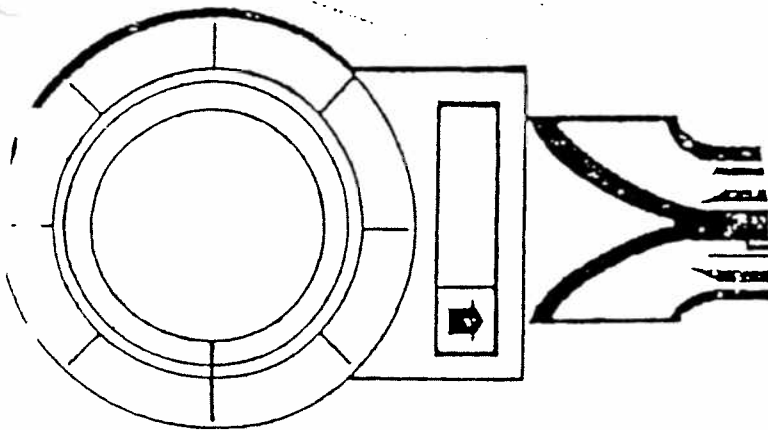
( $< 10^\circ$ )



$\beta_1 = 0^\circ$

$\beta_2 = 0^\circ$

( $< 5^\circ$ )



Level Position to Find  $\gamma$

$Z = A \sin \gamma$  .030 in. ( $< 1/8$  in.)

Level Position to find  $\theta$

$W = A \sin \theta$  0 in. ( $< 1/32$  in.)

Comments PROBE #2

Checked by: RZH

Date: 5-4-90

Calibration Required? POST

# Magnehelic Gauge Calibration Data

0" - .25" Range

Date: 4-5-90

Barometric Pressure: 30.04

Calibrated by: S. Mrazek

Target Reference Pressure	serial #	0.25" Mag #1		0.25" Mag #2		reference
		reference	gauge	reference	gauge	
0.05		0.05	0.053	0.05	0.050	
0.10		0.10	0.103	0.10	0.950	
0.15		0.15	0.160	0.15	0.145	
0.20		0.20	0.205	0.20	0.190	
0.25		0.25	0.250	0.25	0.245	
0.30						

Corection Factor

0.9682

1.0321

For each magnehelic, use the following target pressures:

0.25" gauge	0.50" gauge	1.0" gauge
0.03	0.05	0.10
0.08	0.15	0.30
0.15	0.30	0.60
0.23	0.45	0.90

Date: 4-5-90

Calibrated by: Robert Hall

**HORIZON**

APPENDIX E

Chain-of-Custody Records

[illegible]

Nº 281

# CHAIN OF CUSTODY RECORD

Client/Project Name <b>CA/MAT</b>			Project Location <b>Hewitt Landfill</b>			ANALYSES					
Project No. <b>COI-001</b>			Field Logbook No.								
Sampler: (Signature) <i>R. V. [Signature]</i>			Chain of Custody Tape No.								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	TNMHC	CH <sub>4</sub>	H <sub>2</sub> S	C.O.D. Sulfur	CO <sub>2</sub>	CO	REMARKS
CM-O-1B-TNMHC	4/26/98		91160-3								
CM-O-1A-TNMHC			-4		✓	✓					TRAP#
HL-T-S/H <sub>2</sub> S			-5		✓	✓					
TANK # F	4/26/98		-6								
G			-7		✓	✓		✓	✓		Pressure
											F 240/800
											G 225/800
Relinquished by: (Signature) <i>[Signature]</i>				Date 4/26/98	Time 6:45 pm	Received by: (Signature) <i>[Signature]</i>				Date 4/26/98	Time 6:45 pm
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature)				Date	Time
Sample Disposal Method:				Disposed of by: (Signature)				Date			
SAMPLE COLLECTOR				ANALYTICAL LABORATORY				Date			
HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781											
								Nº 280			

be  
4  
4.5

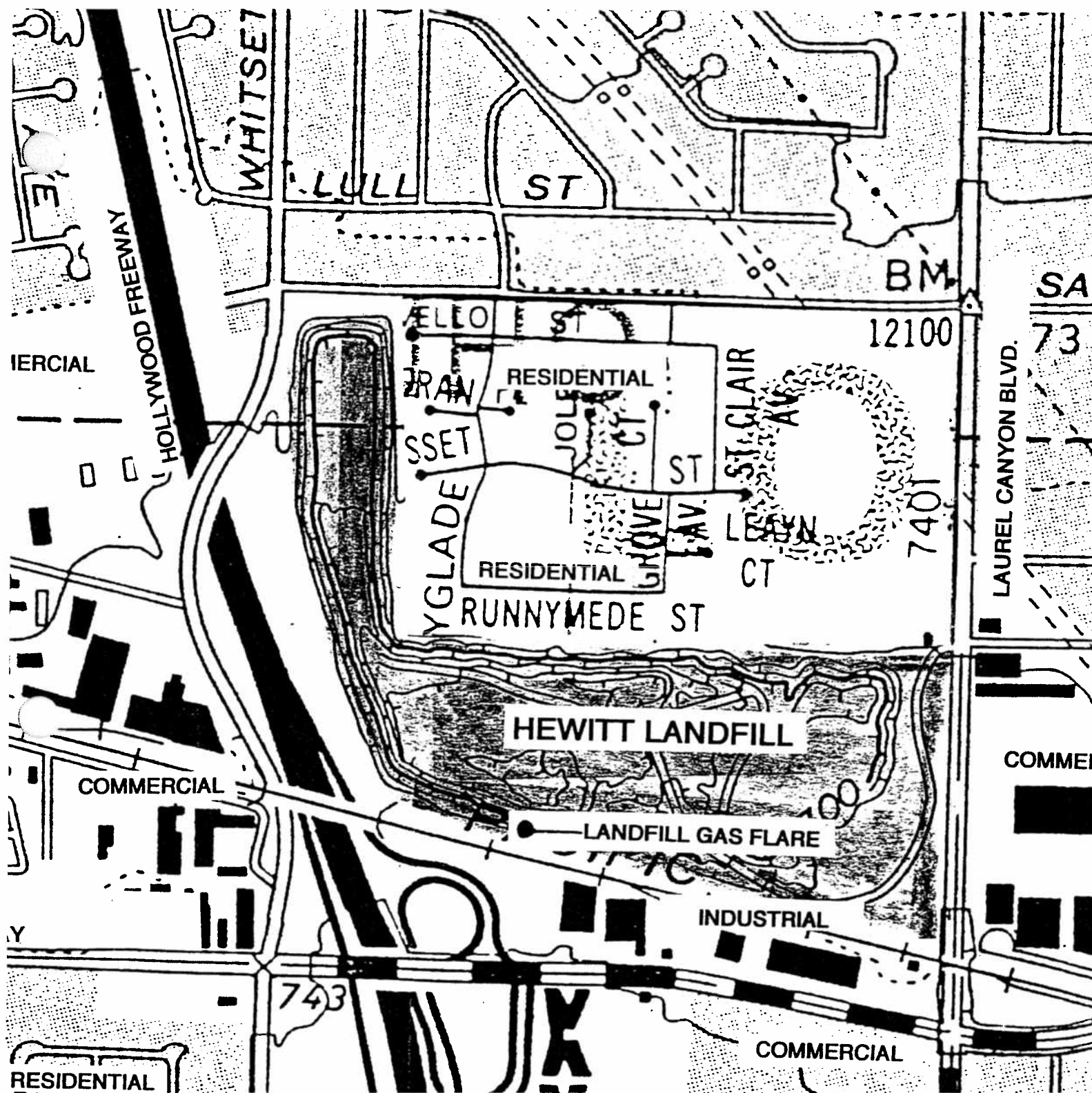
# CHAIN OF CUSTODY RECORD

Client/Project Name <b>Calmat</b>			Project Location <b>North Hollywood</b>			ANALYSES  CO2 TRAP# TANK#						REMARKS
Project No. <b>C01-001</b>			Field Logbook No. <b>SJM-1</b>									
Sampler: (Signature) <b>[Signature]</b>			Chain of Custody Tape No.									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample								
ICV # 12	4/27		91160-6	TRAP # F	X	F	F					LANDFILL INLETS
9	↓		91160-7	TRAP # G	X	G	G					
Relinquished by: (Signature) <b>[Signature]</b>					Date <b>5-1-90</b>	Time <b>8:30 A.M.</b>	Received by: (Signature) <b>[Signature]</b>				Date	Time
Relinquished by: (Signature)					Date	Time	Received by: (Signature)				Date	Time
Relinquished by: (Signature)					Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date <b>5-1-90</b>	Time <b>8:30</b>
Sample Disposal Method:					Disposed of by: (Signature)						Date	Time
SAMPLE COLLECTOR  HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781					ANALYTICAL LABORATORY  <b>AAA</b>						Nº 320	

Client / Project Name						Project Location									
Project No.			Field Logbook No.			ANALYSES									
Sampler: (Signature)			Chain of Custody Tape No.												
Sample No. / Identification		Date	Time	Lab Sample Number		Type of Sample	REMARKS								
1- T - G - 1ms		4/20/90				Tech Bag									
112-O-G-1ms															
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time				
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time				
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature)				Date	Time				
Sample Disposal Method:				Disposed of by: (Signature)							Date	Time			
SAMPLE COLLECTOR						ANALYTICAL LABORATORY									
HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781															
												Nº 282			

Nº 282

**Attachment 3**  
**Area Map of the Hewitt Landfill**





# Thermocouple Calibration Data

Date: 3/21/90  
 Calibrated by: R. Halk  
 Barometric Pressur 30.03

Termocouple ID	Ice Water		Amb ient		Boiling Water		Other*
	reference	Tc	reference	Tc	reference	Tc	reference
FB-1	33	35	72	72	212	210	225
FB-2	33	35	72	71	212	211	225
IMP-1	33	35	72	72	212	-	
IMP-2	33	33	72	72	212	-	
DGM-1 inlet	33	34	72	73	212	210	
DGM-1 outlet	33	35	72	72	212	213	
DGM-2 outlet	33	33	72	71	212	215	
DGM-2 inlet	33	34	72	71	212	213	
Stack #3 - 1	33	36	72	73	212	211	
Stack #5 - 1	42	42	72	70	212	210	

\* Heated Filter Box

Calibrated by: \_\_\_\_\_

**HORIZON**

ITEM: 31-6741-8  
PART NO.

DESCRIPTION  
1 Detachable Pitot End piece ss

SERIAL NO.  
1 B393

DATE  
2-13-8

SOLD TO: Horizon air measurement  
COMPANY

P.O. NO.  
1 No 1002-1

S.O. NO.  
1 95-98

DATE

2.1 Type 8 Pitot Tube. The Type 8 pitot tube (Figure 2-1) shall be made of metal tubing (e.g., stainless steel). It is recommended that the external tubing diameter (dimension  $D_t$ , Figure 2-2b) be between 0.48 and 0.95 centimeters ( $1/16$  and  $3/16$  inch). There shall be an equal distance from the base of each leg of the pitot tube to its face-opening plane (dimensions  $P_1$  and  $P_2$ , Figure 2-2b); it is recommended that this distance be between 1.00 and 1.50 times the external tubing diameter. The face openings of the pitot tube shall, preferably, be aligned as shown in Figure 2-2; however, slight misalignments of the openings are permissible (see Figure 2-3).

The Type 8 pitot tube shall have a known coefficient, determined as outlined in Section 4. An identification number shall be assigned to the pitot tube; this number shall be permanently marked or engraved on the body of the tube.

#### 4. Calibration

4.1 Type 8 Pitot Tube. Before its initial use, carefully examine the Type 8 pitot tube in top, side, and end views to verify that the face openings of the tube are aligned within the specifications illustrated in Figure 2-2 or 2-3. The pitot tube shall not be used if it fails to meet these alignment specifications.

After verifying the face opening alignment, measure and record the following dimensions of the pitot tube:

(a) the external tubing diameter (dimension  $D_t$ , Figure 2-2b); and (b) the base-to-opening plane distance (dimensions  $P_1$  and  $P_2$ , Figure 2-2b). If  $D_t$  is between 0.48 and 0.95 cm ( $1/16$  and  $3/16$  in.) and if  $P_1$  and  $P_2$  are equal and between 1.00 and 1.50  $D_t$ , there are two possible options: (1) the pitot tube may be calibrated according to the procedure outlined in Sections 4.1.2 through 4.1.5 below, or (2) a baseline (isolated tube) coefficient value of 0.84 may be assigned to the pitot tube. Note, however, that if the pitot tube is part of an assembly, calibration may still be required, despite knowledge of the baseline coefficient value (see Section 4.1.1). If  $D_t$ ,  $P_1$ , and  $P_2$  are outside the specified limits, the pitot tube must be calibrated as outlined in 4.1.2 through 4.1.5 below.

4.1.1 Type 8 Pitot Tube Assemblies. During sample and velocity traverses, the isolated Type 8 pitot tube is not always used; in many instances, the pitot tube is used in combination with other source-sampling components (thermocouple, sampling probe, nozzle) as part of an "assembly." The presence of other sampling components can sometimes affect the baseline value of the Type 8 pitot tube coefficient (Citation 9 in Section 8); therefore an assigned (or otherwise known) baseline coefficient

value may or may not be valid for a given assembly. The baseline and assembly coefficient values will be identical only when the relative placement of the components in the assembly is such that aerodynamic interference effects are eliminated. Figures 2-4 through 2-8 illustrate interference-free component arrangements for Type 8 pitot tubes having external tubing diameters between 0.48 and 0.95 cm ( $1/16$  and  $3/16$  in.). Type 8 pitot tube assemblies that fail to meet any or all of the specifications of Figures 2-4 through 2-8 shall be calibrated according to the procedure outlined in Sections 4.1.2 through 4.1.5 below, and prior to calibration, the values of the inter-component spacings (pitot-cozzle, pitot-thermocouple, pitot-probe sheath) shall be measured and recorded.

Note.—Do not use any Type 8 pitot tube assembly which is constructed such that the impact pressure opening plane of the pitot tube is below the entry plane of the cozzle (see Figure 2-6b).

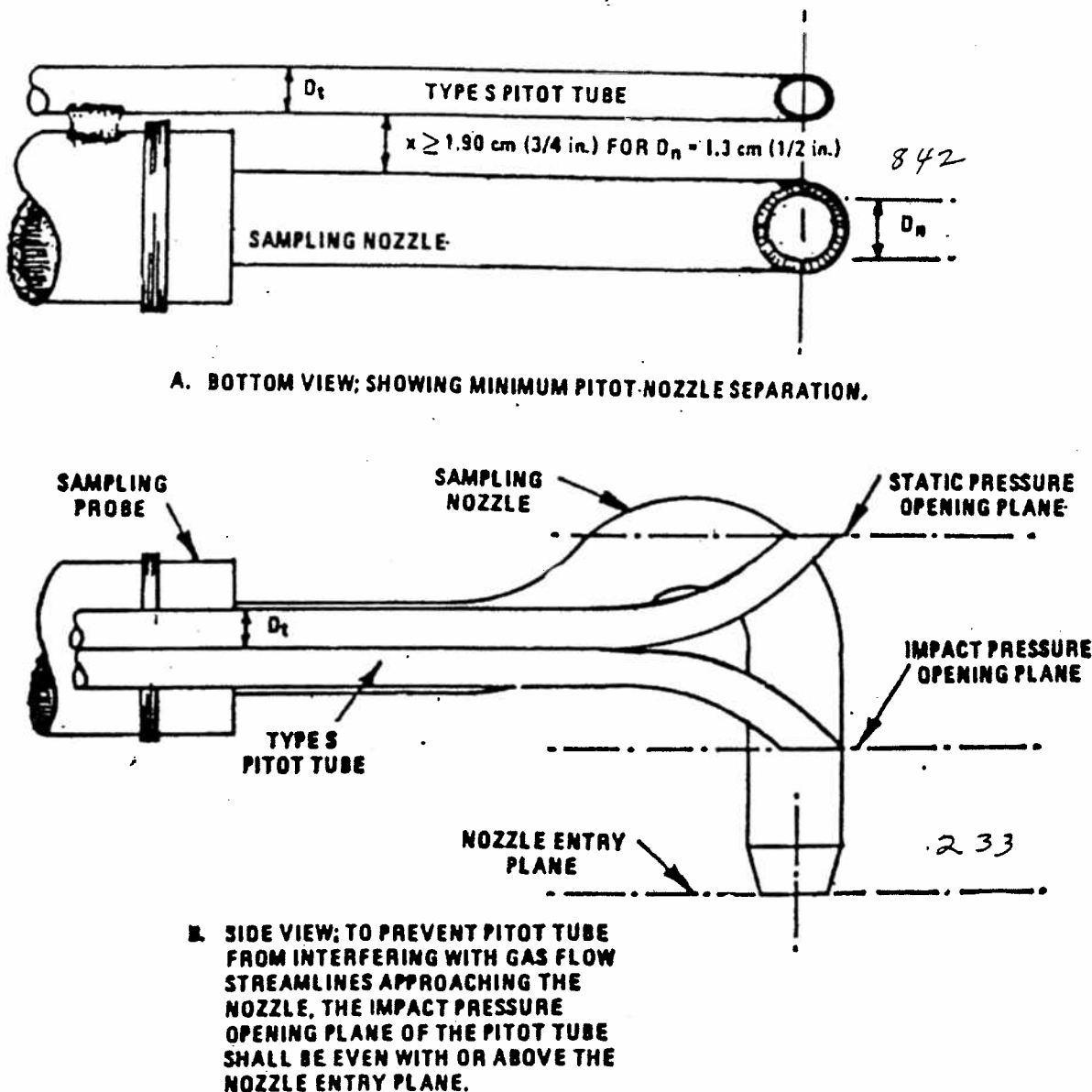


Figure 2-6. Proper pitot tube - sampling nozzle configuration to prevent aerodynamic interference; buttonhook - type nozzle; centers of nozzle and pitot opening aligned;  $D_t$  between 0.48 and 0.95 cm ( $3/16$  and  $3/8$  in.).

# Control Box Calibration Data

Date: 3/21/90  
 Meter Box Number 2  
 Orifice Number: 994  
 DGM Number: N/A

Calibrated by: R. Halk  
 Barometric Pressure: 30.03

Orifice setting (H)	Gas Volumes			Temperatures			Time	Y	H@
	Wet Test (cu.ft)	Dry Gas Initial (cu.ft)	Dry Gas Final (cu.ft)	DGM Initial (F)	DGM final (F)	WTM (F)	(min)		
0.5	7.50	38.800	46.401	97	99	74	17.88	1.0298	1.53
1	8.10	46.600	55.100	97	99	74	14.53	0.9933	1.73
1.5	11.40	55.300	67.202	98	99	74	17.05	0.9981	1.80
2	11.83	67.420	79.688	99	101	74	15.32	1.0063	1.80
3	10.88	80.000	91.245	99	102	74	11.45	1.0082	1.74
AVERAGE								1.0069	1.720

Calibrated by:

*Robert B. Halk*

Reviewed by:

*J. Mrazek*

HORIZON

SERIAL # 393  
5-4-90

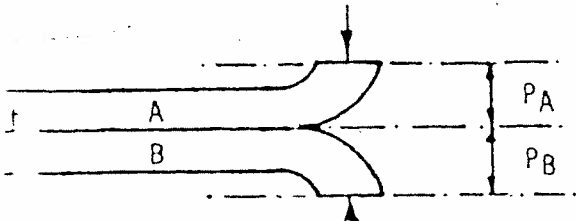
TYPE S PITOT TUBE INSPECTION DATA FORM

Tubing diameter,  $D_t$  \_\_\_\_\_ in.

Pitot Tube Assembly Level? Yes / No

Pitot Tube Openings Damaged? Yes / No

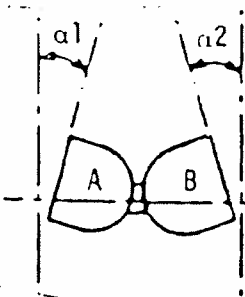
A-SIDE PLANE



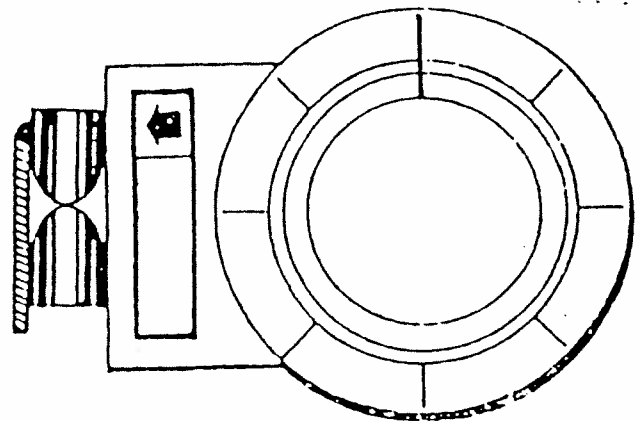
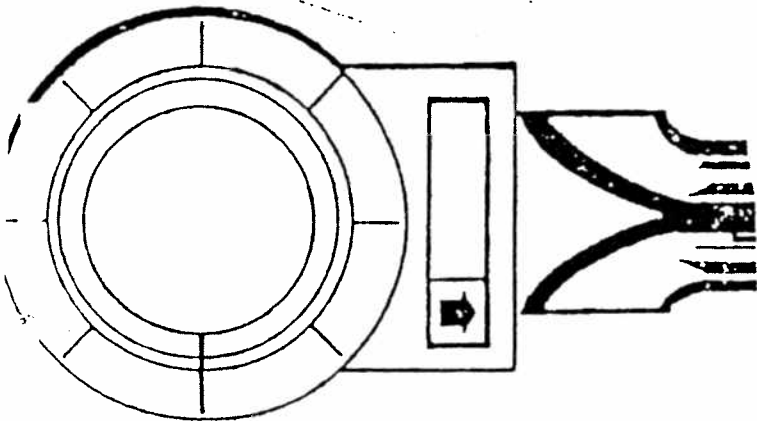
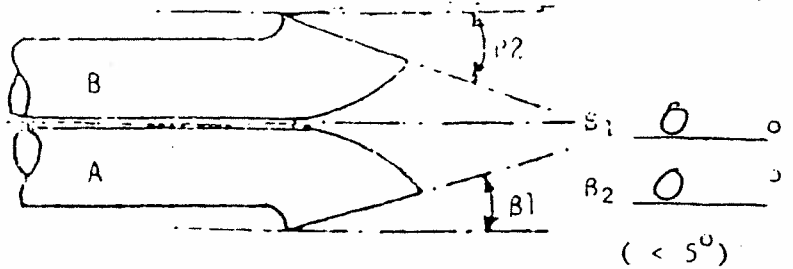
NOTE:

$P_A = .517$  in.

$\left\{ \begin{array}{l} 1.05 D_t < P < 1.50 D_t \\ P_A = P_B \end{array} \right.$   $P_B = .526$  in.



$\alpha_1 = 1^\circ$   
 $\alpha_2 = 1^\circ$   
( $< 10^\circ$ )



Level Position to Find  $\gamma$

$Z = A \sin \gamma$  0 in. ( $< 1/8$  in.)

Level Position to find  $\theta$

$W = A \sin \theta$  0 in. ( $< 1/32$  in.)

Comments Pitot for probe #1

Checked by: RIZH

Date: 5-4-90

Calibration Required? POST

pitot tube  
SERIAL # 394

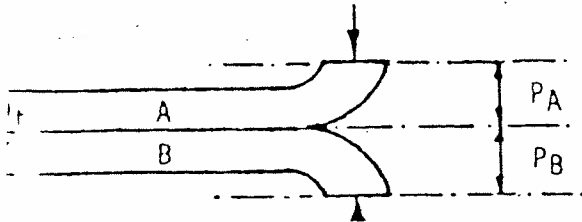
TYPE S PITOT TUBE INSPECTION DATA FORM

Tubing diameter,  $D_t$  \_\_\_\_\_ in.

Pitot Tube Assembly Level? Yes / No

Pitot Tube Openings Damaged? Yes / No

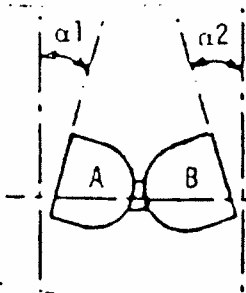
A-SIDE PLANE



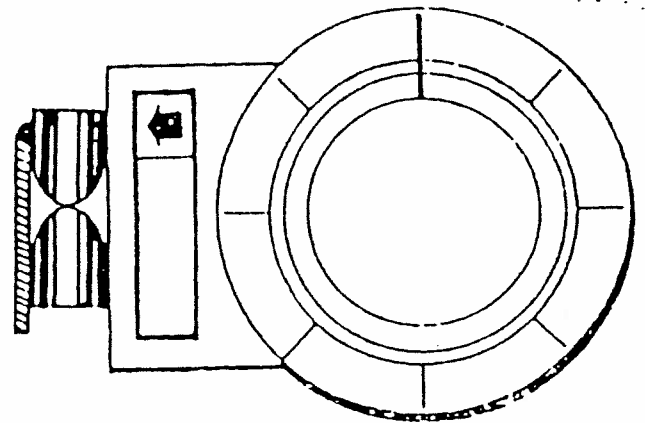
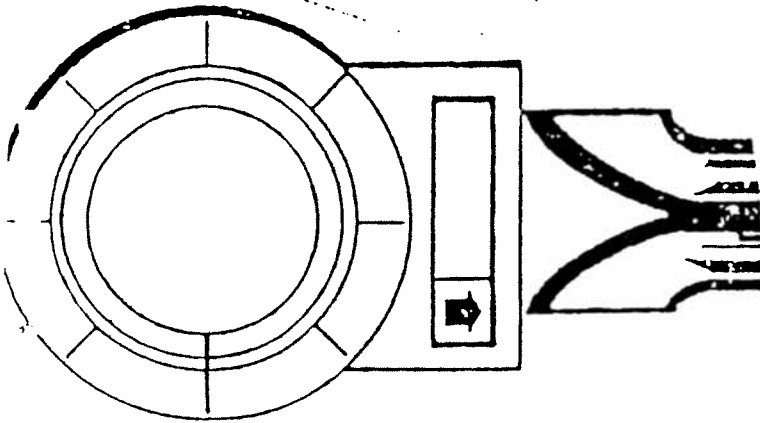
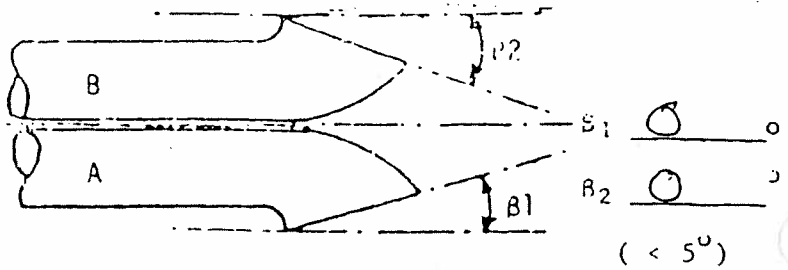
NOTE:

$P_A = .526$  in.

$\left\{ \begin{array}{l} 1.05 D_t < P < 1.1 D_t \\ P_A = P_B \end{array} \right.$   $P_B = .521$  in.



$\alpha_1 = 1^\circ$   
 $\alpha_2 = 0^\circ$   
( $< 10^\circ$ )



Level Position to Find  $\gamma$

$Z = A \sin \gamma$  .030 in. ( $< 1/8$  in.)

Level Position to find  $\theta$

$W = A \sin \theta$  0 in. ( $< 1/32$  in.)

Comments PROBE #2

Checked by: RZH

Date: 5-4-90

Calibration Required? POST

# Magnehelic Gauge Calibration Data

0" - .25" Range

Date: 4-5-90

Barometric Pressure: 30.04

Calibrated by: S. Mrazek

Target Reference Pressure	serial #	0.25" Mag #1		0.25" Mag #2			
		reference	gauge	reference	gauge	reference	gau
0.05		0.05	0.053	0.05	0.050		
0.10		0.10	0.103	0.10	0.950		
0.15		0.15	0.160	0.15	0.145		
0.20		0.20	0.205	0.20	0.190		
0.25		0.25	0.250	0.25	0.245		
0.30							

Corection Factor

0.9682

1.0321

For each magnehelic, use the following target pressures:

0.25" gauge	0.50" gauge	1.0" gauge
0.03	0.05	0.10
0.08	0.15	0.30
0.15	0.30	0.60
0.23	0.45	0.90

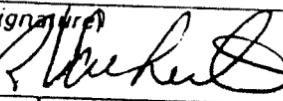
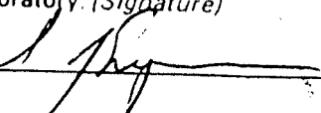
Date: 4-5-90

Calibrated by: Robert Halk

**HORIZON**

## APPENDIX E

### Chain-of-Custody Records

CHAIN OF CUSTODY RECORD										
Client/Project Name <b>Cal/MAT</b>				Project Location <b>HEWITT LANDFILL</b>			<div style="text-align: center;">ANALYSES</div> <div style="transform: rotate(-45deg); transform-origin: center; font-weight: bold;">SAGND Method 5.1</div>			
Project No. <b>001-001</b>				Field Logbook No.						
Sampler: (Signature) 				Chain of Custody Tape No.						
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample						
CM-O-PF-1	4/24								REMARKS	
CM-FH-1	4/24				X					
CM-O-PF-2	4/27				X					
CM-FH-2	4/27				X					
Relinquished by: (Signature)				Date	Time	Received by: (Signature)			Date	Time
Relinquished by: (Signature)				Date	Time	Received by: (Signature)			Date	Time
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature)			Date	Time
Sample Disposal Method:				Disposed of by: (Signature) 				Date <b>4-27-90</b>	Time	
SAMPLE COLLECTOR  HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781				ANALYTICAL LABORATORY				Nº 281		

**Nº 281**

# CHAIN OF CUSTODY RECORD

Client/Project Name <b>CA/MAT</b>			Project Location <b>Hewitt Landfill</b>			ANALYSES						
Project No. <b>COI-001</b>			Field Logbook No.			<div style="display: flex; justify-content: space-around;"> <div>TNMHC</div> <div>CH<sub>4</sub></div> <div>H<sub>2</sub>S</div> <div>C-13 Sulfur</div> <div>CO<sub>2</sub></div> <div>CO</div> </div>						
Sampler: (Signature) <i>R. Vachet</i>			Chain of Custody Tape No.									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS							
CM-0-1B-TNMHC	4/26/98		91160-3									
CM-0-1A-TNMHC			-4			✓	✓					TRAP#
HL-T-S/H <sub>2</sub> S			-5			✓	✓					
TANK# F	4/26/98		-6			✓	✓					Pressure
G			-7			✓	✓					F 240/800
												G 225/800
Relinquished by: (Signature) <i>R. Vachet</i>				Date 4/26/98	Time 6:45pm	Received by: (Signature) <i>Kalvin Pump</i>				Date 4/26/98	Time 6:45pm	
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature)				Date	Time	
Sample Disposal Method:				Disposed of by: (Signature)				Date				Time
SAMPLE COLLECTOR				ANALYTICAL LABORATORY								
HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781								N° 280				

p1  
 DES.  
 4.5m  
 4.5mm

Client / Project Name						Project Location									
Project No.						Field Logbook No.									
Sampler: (Signature)						Chain of Custody Tape No.									
Sample No. / Identification		Date	Time	Lab Sample Number		Type of Sample		ANALYSES						REMARKS	
ICV # 12		4/27		91160-6		TRAP # F		X	F	F				LANDFILL INLETS	
9		↓		91160-7		TRAP # G		X	G	G					
Relinquished by: (Signature)						Date	Time	Received by: (Signature)						Date	Time
Relinquished by: (Signature)						Date	Time	Received by: (Signature)						Date	Time
Relinquished by: (Signature)						Date	Time	Received for Laboratory: (Signature)						Date	Time
Sample Disposal Method:						Disposed of by: (Signature)						Date	Time		
SAMPLE COLLECTOR						ANALYTICAL LABORATORY									
HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781						AAA									
												Nº 320			

# CHAIN OF CUSTODY RECORD

Client/Project Name <b>CA/MAT</b>			Project Location <b>Mount Baldy</b>			ANALYSES  <i>14 Specimen Hydrocarbon (list enclosed)</i>				REMARKS	
Project No.			Field Logbook No.								
Sampler: (Signature) <i>[Signature]</i>			Chain of Custody Tape No.								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							
114-J-GG/MS	4/26/90			Tedlar Bag		✓					
114-O-GG/MS						✓					
Relinquished by: (Signature) <i>[Signature]</i>					Date 4/27/90	Time 1130	Received by: (Signature) <i>[Signature]</i>			Date 4/27/90	Time 1130
Relinquished by: (Signature)					Date	Time	Received by: (Signature)			Date	Time
Relinquished by: (Signature)					Date	Time	Received for Laboratory: (Signature)			Date	Time
Sample Disposal Method:					Disposed of by: (Signature)					Date	Time
SAMPLE COLLECTOR  HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781					ANALYTICAL LABORATORY					Nº 282	



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE .....30-JAN-90  
WEEKLY MONITORING PERIOD..... 5-JAN TO 24-JAN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	76
NO. OF PROBES MONITORED.....	74
NO. OF PROBES WITH NO METHANE.....	72
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	2
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#41 TRACE TO 4.9% METHANE  
#42 TRACE TO 4.9% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 1-24-90

### 1. FLARE STATION DATA

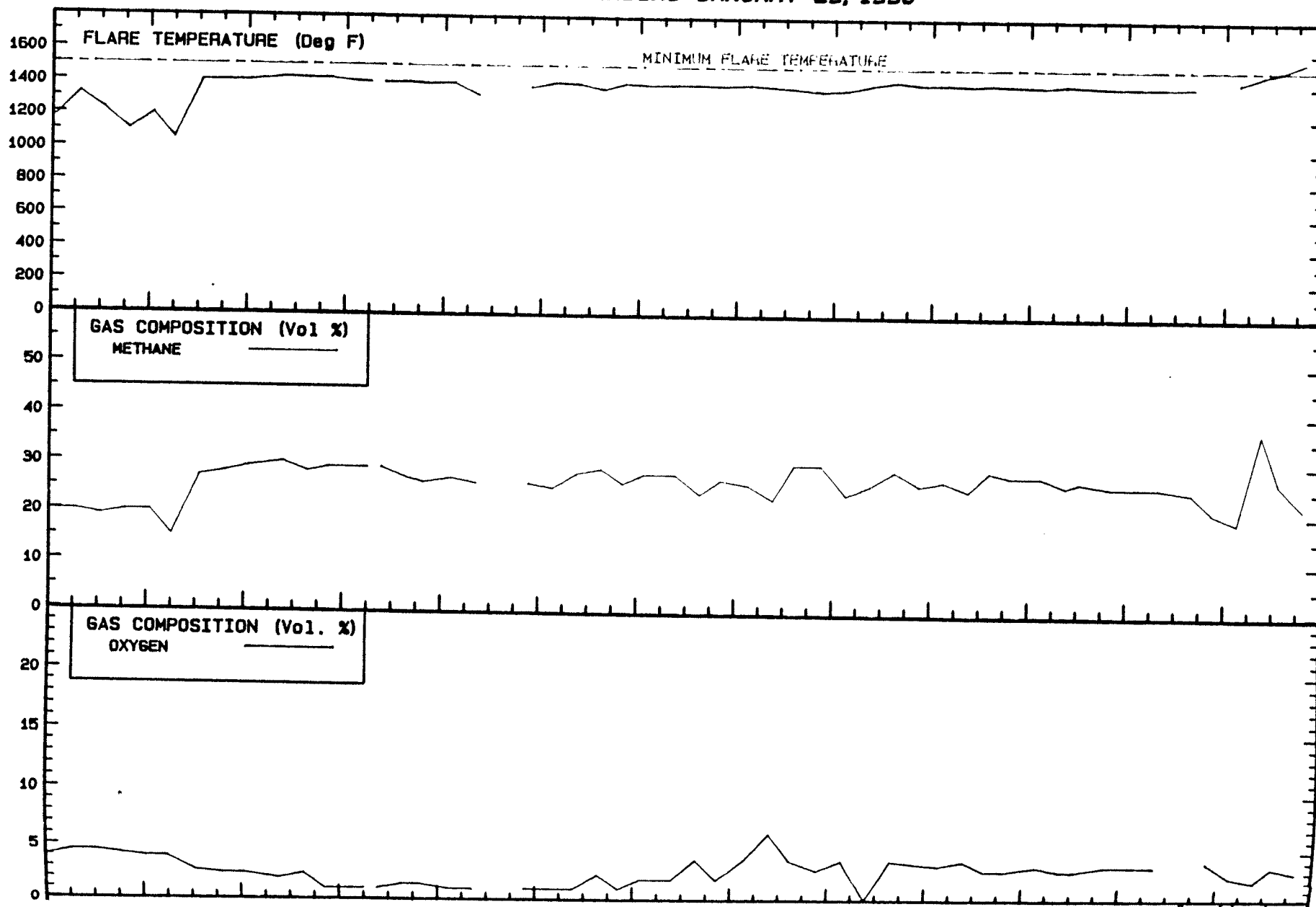
MONITORING DATE	12-29	1-5	1-12	1-17	1-24
START TIME	—	1130	—	—	—
TEMPERATURE (Deg F)	—	1425	1475	1500	1560
METHANE (Vol %)	21	19	37	27	22
OXYGEN (Vol %)	4.0	2.5	2.0	3.5	3.0
VACUUM (In. H2O)	-20	-28.5	-28	-27	-25
BACK PRESS. (In. H2O)	1.6	12.0	2.4	10.0	11.0
GAS FLOW (In. H2O)	—	—	—	—	—

### 2. PROBLEM PROBES

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
2	4	0.2	0	0	0
2A	1	0	0	0	0
3B	0	0.1	0	0	0
9	0	0.1	0	0	0
25A	NRD	NRD	NRD	NRD	NRD
34	0	0.2	0	3	0
40	4	0.2	0	0	0
41	5	0.2	0	0	0.2
42	7	0	0	0	0.2
44A	NRD	NRD	NRD	NRD	NRD

NRD = NOT REPORTED

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JANUARY 29, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE .....30-JAN-90  
WEEKLY MONITORING PERIOD..... 5-JAN TO 24-JAN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	76
NO. OF PROBES MONITORED.....	74
NO. OF PROBES WITH NO METHANE.....	72
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	2
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#41 TRACE TO 4.9% METHANE  
#42 TRACE TO 4.9% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 1-24-90

### 1. FLARE STATION DATA

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
START TIME	--	1130	--	--	--
TEMPERATURE (Deg F)	--	1425	1475	1500	1560
METHANE (Vol %)	21	19	37	27	22
OXYGEN (Vol %)	4.0	2.5	2.0	3.5	3.0
VACUUM (In. H2O)	-20	-28.5	-28	-27	-25
BACK PRESS. (In. H2O)	1.6	12.0	2.4	10.0	11.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
2	4	0.2	0	0	0
2A	1	0	0	0	0
3B	0	0.1	0	0	0
9	0	0.1	0	0	0
25A	NRD	NRD	NRD	NRD	NRD
34	0	0.2	0	3	0
40	4	0.2	0	0	0
41	5	0.2	0	0	0.2
42	7	0	0	0	0.2
44A	NRD	NRD	NRD	NRD	NRD

NRD = NOT REPORTED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
SPECIAL STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	<b>4</b>	<b>0.2</b>	0	0	0
2A	<b>1</b>	0	0	0	0
3B	0	<b>0.1</b>	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	<b>0.1</b>	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0

EXHIBIT A (Continued)

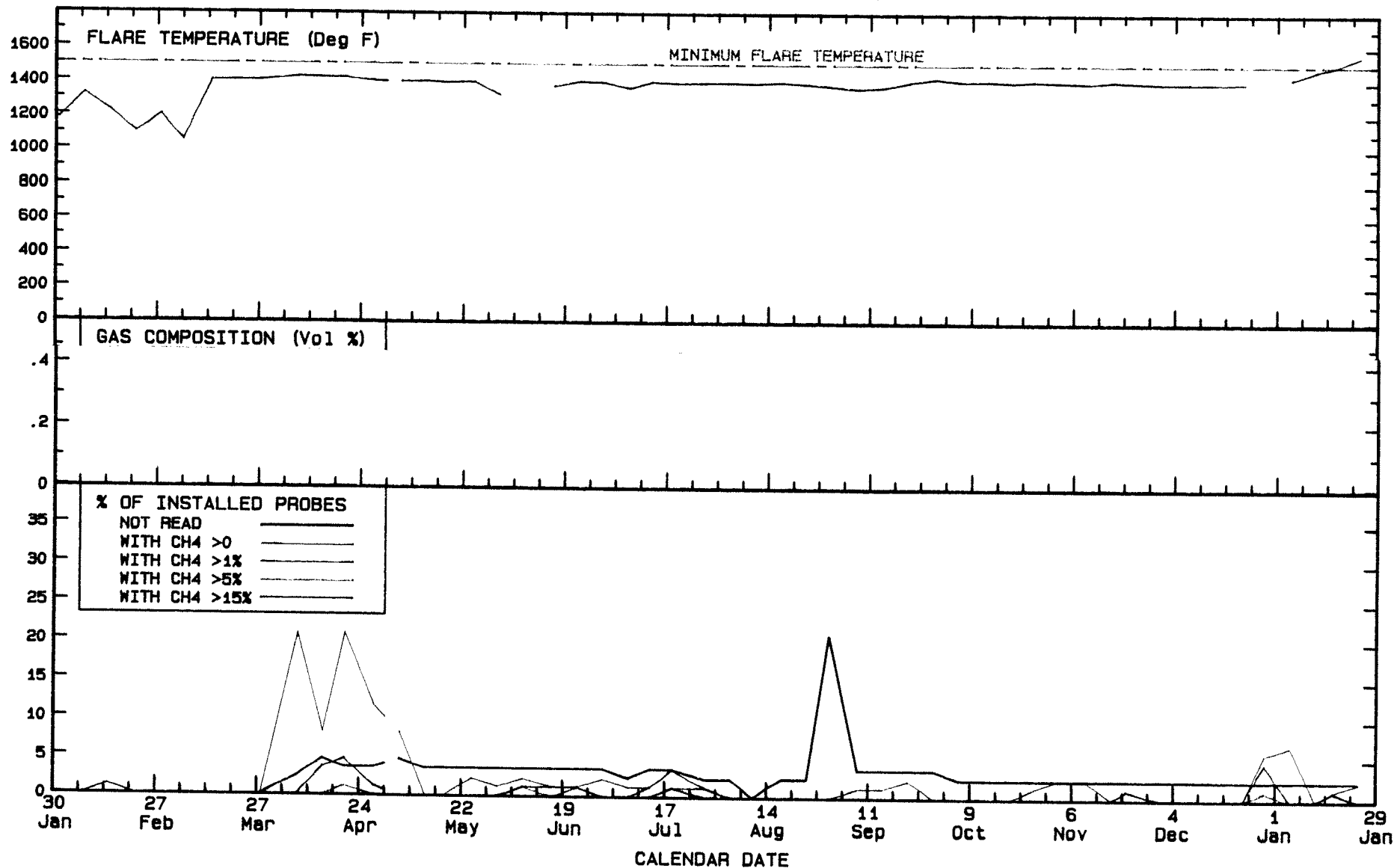
MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

House  
Office  
Self  
Storage

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING JANUARY 29, 1990**



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE .....30-JAN-90  
WEEKLY MONITORING PERIOD..... 5-JAN TO 24-JAN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	76
NO. OF PROBES MONITORED.....	74
NO. OF PROBES WITH NO METHANE.....	72
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	2
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#41 TRACE TO 4.9% METHANE  
#42 TRACE TO 4.9% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 1-24-90

### 1. FLARE STATION DATA

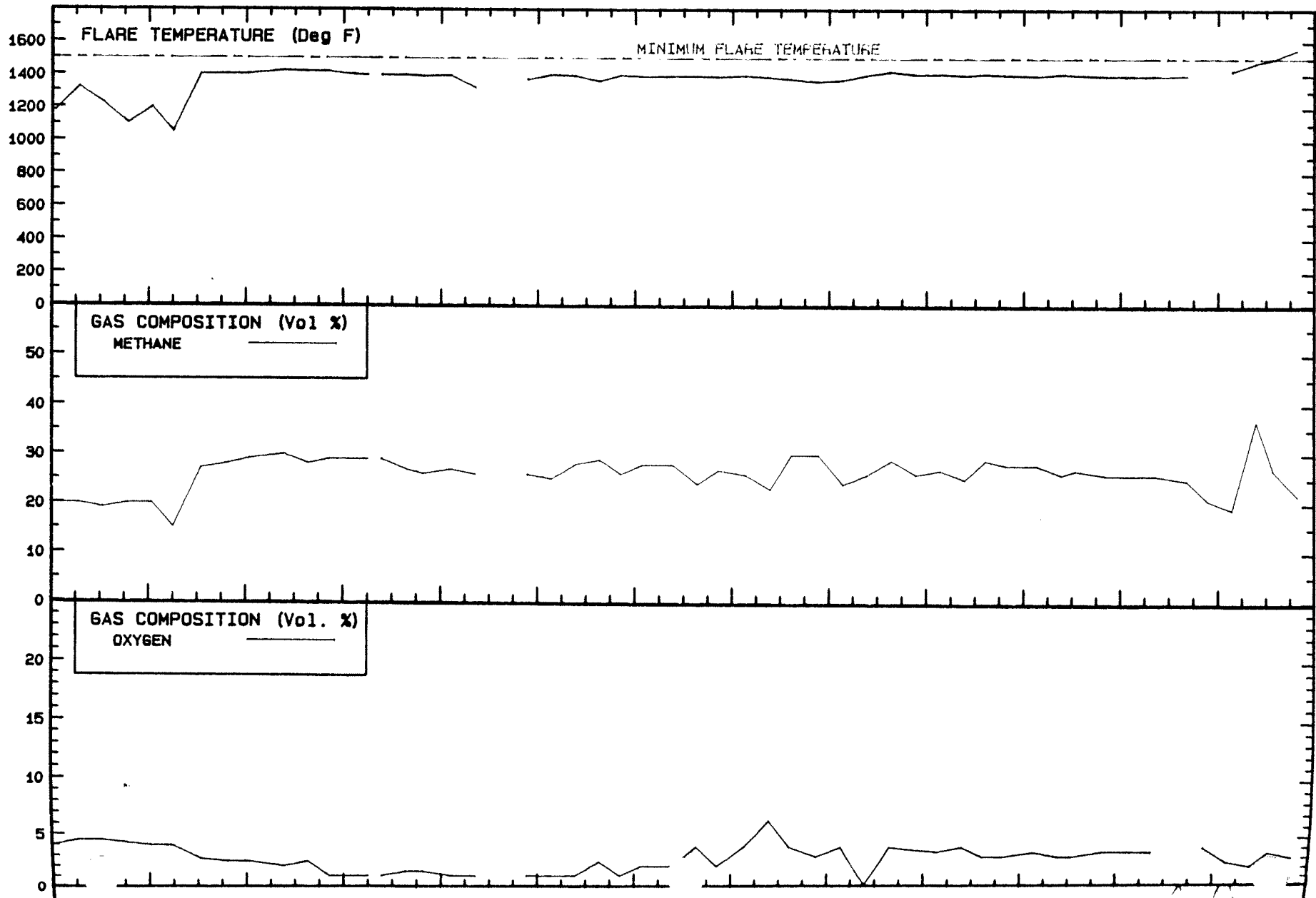
MONITORING DATE	12-29	1-5	1-12	1-17	1-24
START TIME	--	1130	--	--	--
TEMPERATURE (Deg F)	--	1425	1475	1500	1560
METHANE (Vol %)	21	19	37	27	22
OXYGEN (Vol %)	4.0	2.5	2.0	3.5	3.0
VACUUM (In. H2O)	-20	-28.5	-28	-27	-25
BACK PRESS. (In. H2O)	1.6	12.0	2.4	10.0	11.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
2	4	0.2	0	0	0
2A	1	0	0	0	0
3B	0	0.1	0	0	0
9	0	0.1	0	0	0
25A	NRD	NRD	NRD	NRD	NRD
34	0	0.2	0	3	0
40	4	0.2	0	0	0
41	5	0.2	0	0	0.2
42	7	0	0	0	0.2
44A	NRD	NRD	NRD	NRD	NRD

NRD = NOT REPORTED

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JANUARY 29, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE .....30-JAN-90  
WEEKLY MONITORING PERIOD..... 5-JAN TO 24-JAN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	76
NO. OF PROBES MONITORED.....	74
NO. OF PROBES WITH NO METHANE.....	72
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	2
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#41 TRACE TO 4.9% METHANE  
#42 TRACE TO 4.9% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 1-24-90

### 1. FLARE STATION DATA

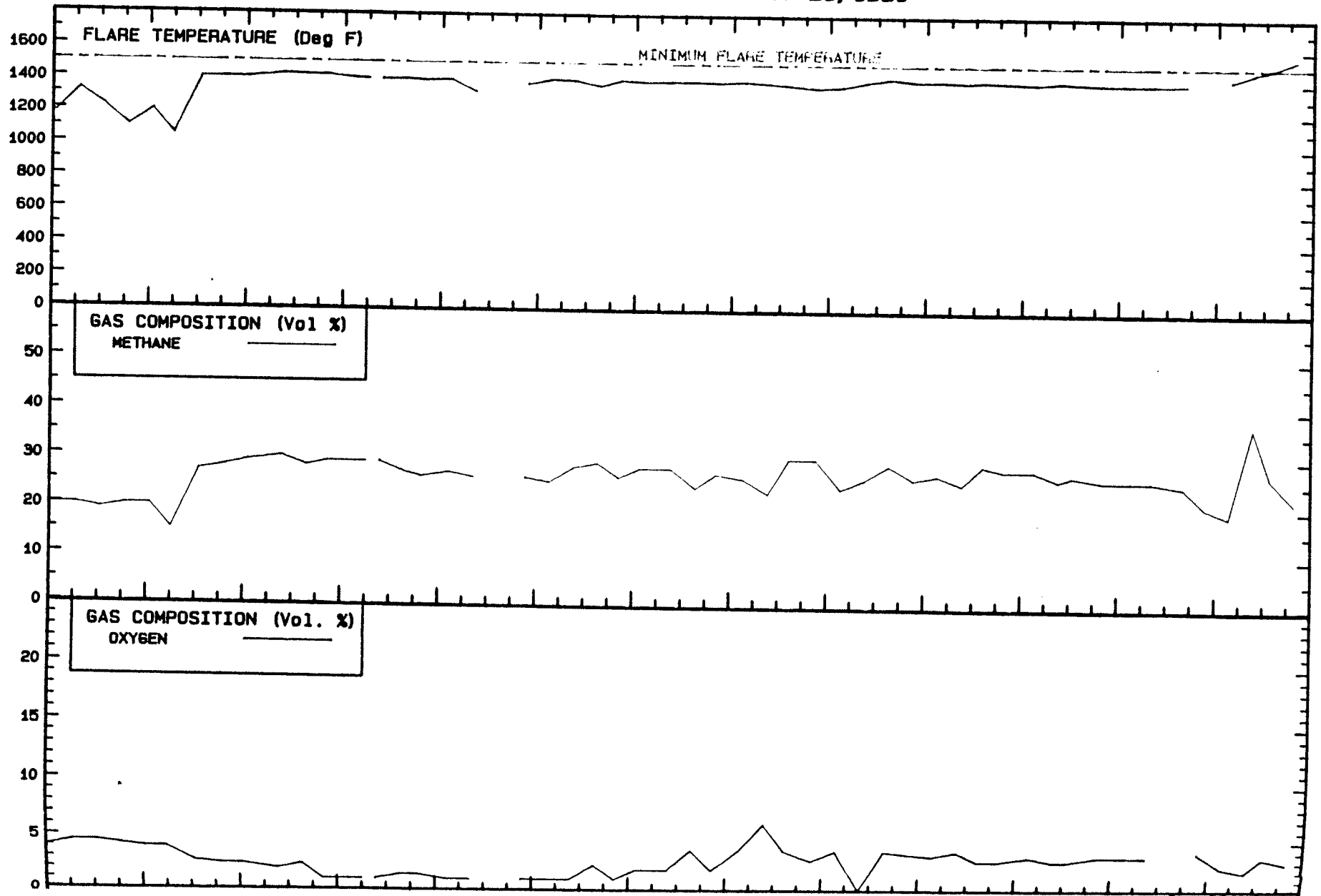
MONITORING DATE	12-29	1-5	1-12	1-17	1-24
START TIME	--	1130	--	--	--
TEMPERATURE (Deg F)	--	1425	1475	1500	1560
METHANE (Vol %)	21	19	37	27	22
OXYGEN (Vol %)	4.0	2.5	2.0	3.5	3.0
VACUUM (In. H2O)	-20	-28.5	-28	-27	-25
BACK PRESS. (In. H2O)	1.6	12.0	2.4	10.0	11.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
2	4	0.2	0	0	0
2A	1	0	0	0	0
3B	0	0.1	0	0	0
9	0	0.1	0	0	0
25A	NRD	NRD	NRD	NRD	NRD
34	0	0.2	0	3	0
40	4	0.2	0	0	0
41	5	0.2	0	0	0.2
42	7	0	0	0	0.2
44A	NRD	NRD	NRD	NRD	NRD

NRD = NOT REPORTED

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JANUARY 29, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE .....30-JAN-90  
WEEKLY MONITORING PERIOD..... 5-JAN TO 24-JAN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	76
NO. OF PROBES MONITORED.....	74
NO. OF PROBES WITH NO METHANE.....	72
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	2
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#41 TRACE TO 4.9% METHANE  
#42 TRACE TO 4.9% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 1-24-90

### 1. FLARE STATION DATA

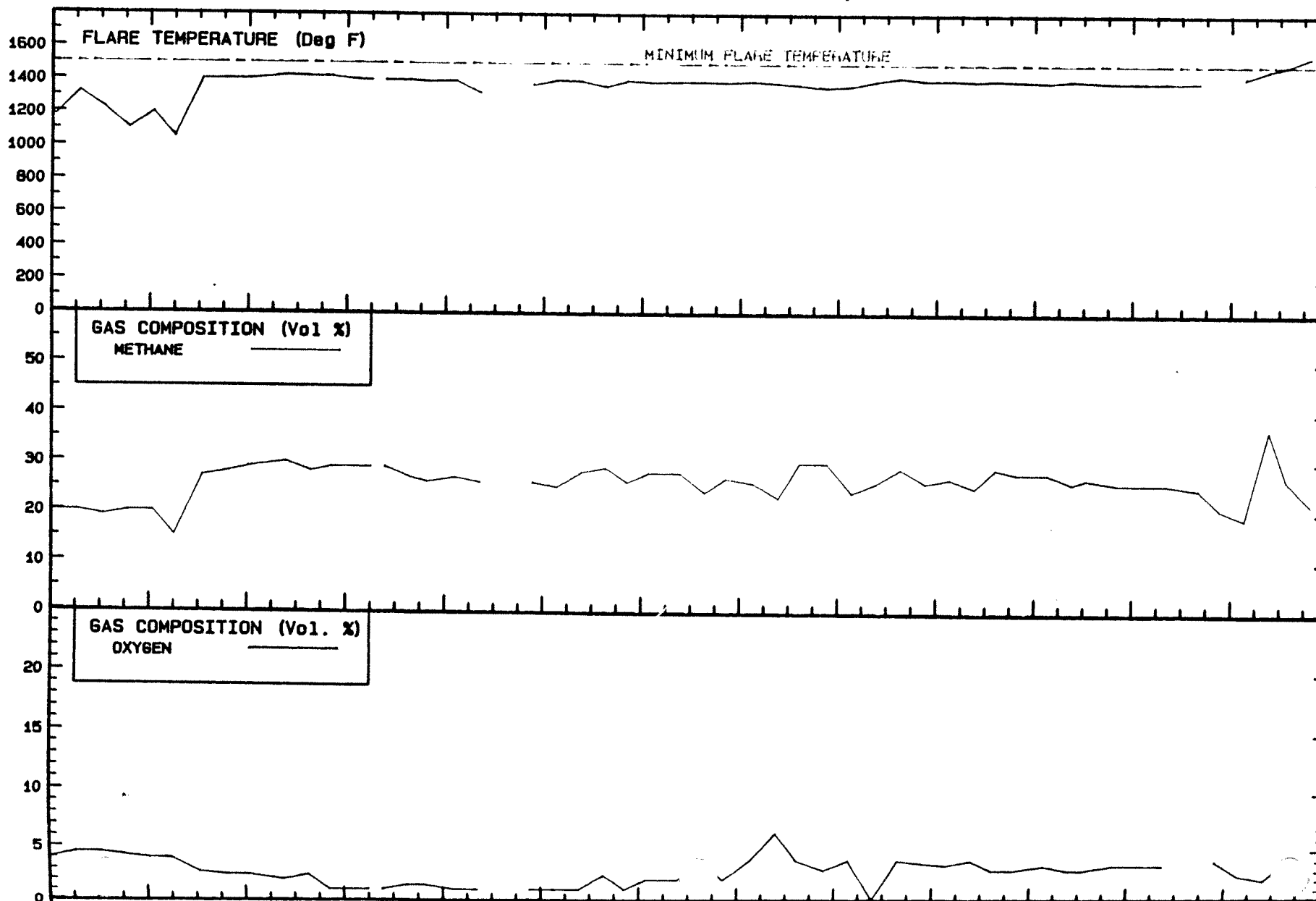
MONITORING DATE	12-29	1-5	1-12	1-17	1-24
START TIME	--	1130	--	--	--
TEMPERATURE (Deg F)	--	1425	1475	1500	1560
METHANE (Vol %)	21	19	37	27	22
OXYGEN (Vol %)	4.0	2.5	2.0	3.5	3.0
VACUUM (In. H2O)	-20	-28.5	-28	-27	-25
BACK PRESS. (In. H2O)	1.6	12.0	2.4	10.0	11.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
2	4	0.2	0	0	0
2A	1	0	0	0	0
3B	0	0.1	0	0	0
9	0	0.1	0	0	0
25A	NRD	NRD	NRD	NRD	NRD
34	0	0.2	0	3	0
40	4	0.2	0	0	0
41	5	0.2	0	0	0.2
42	7	0	0	0	0.2
44A	NRD	NRD	NRD	NRD	NRD

NRD = NOT REPORTED

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JANUARY 29, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE .....30-JAN-90  
WEEKLY MONITORING PERIOD..... 5-JAN TO 24-JAN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	76
NO. OF PROBES MONITORED.....	74
NO. OF PROBES WITH NO METHANE.....	72
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	2
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#41 TRACE TO 4.9% METHANE  
#42 TRACE TO 4.9% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 1-24-90

### 1. FLARE STATION DATA

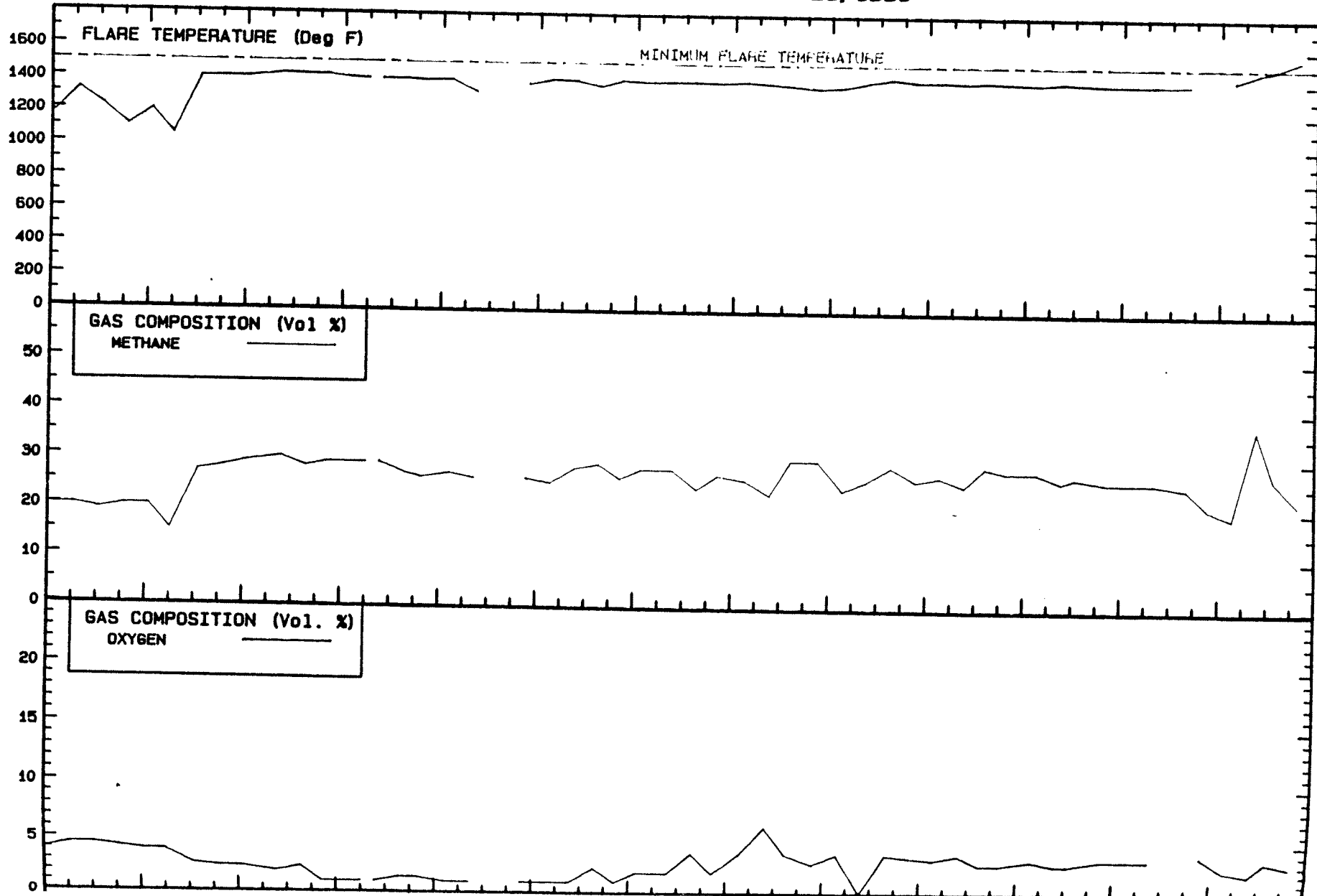
MONITORING DATE	12-29	1-5	1-12	1-17	1-24
START TIME	—	1130	—	—	—
TEMPERATURE (Deg F)	—	1425	1475	1500	1560
METHANE (Vol %)	21	19	37	27	22
OXYGEN (Vol %)	4.0	2.5	2.0	3.5	3.0
VACUUM (In. H2O)	-20	-28.5	-28	-27	-25
BACK PRESS. (In. H2O)	1.6	12.0	2.4	10.0	11.0
GAS FLOW (In. H2O)	—	—	—	—	—

### 2. PROBLEM PROBES

MONITORING DATE	12-29	1-5	1-12	1-17	1-24
PROBE	VOLUME % METHANE				
2	4	0.2	0	0	0
2A	1	0	0	0	0
3B	0	0.1	0	0	0
9	0	0.1	0	0	0
25A	NRD	NRD	NRD	NRD	NRD
34	0	0.2	0	3	0
40	4	0.2	0	0	0
41	5	0.2	0	0	0.2
42	7	0	0	0	0.2
44A	NRD	NRD	NRD	NRD	NRD

NRD = NOT REPORTED

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JANUARY 29, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 3-MAR 90  
WEEKLY MONITORING PERIOD..... 7-FEB TO 28-FEB-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 2-28-90

#### 1. FLARE STATION DATA

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
START TIME	--	--	0800	0800	--
TEMPERATURE (Deg F)	1564	1551	1563	1563	1560
METHANE (Vol %)	27	26	27	26	26
OXYGEN (Vol %)	4.0	4.0	5.0	4.0	4.0
VACUUM (In. H2O)	-26	-24	-18	-28	-28
BACK PRESS. (In. H2O)	12.0	13.0	29.0	17.0	18.0
GAS FLOW (In. H2O)	--	--	--	--	--

#### 2. PROBLEM PROBES

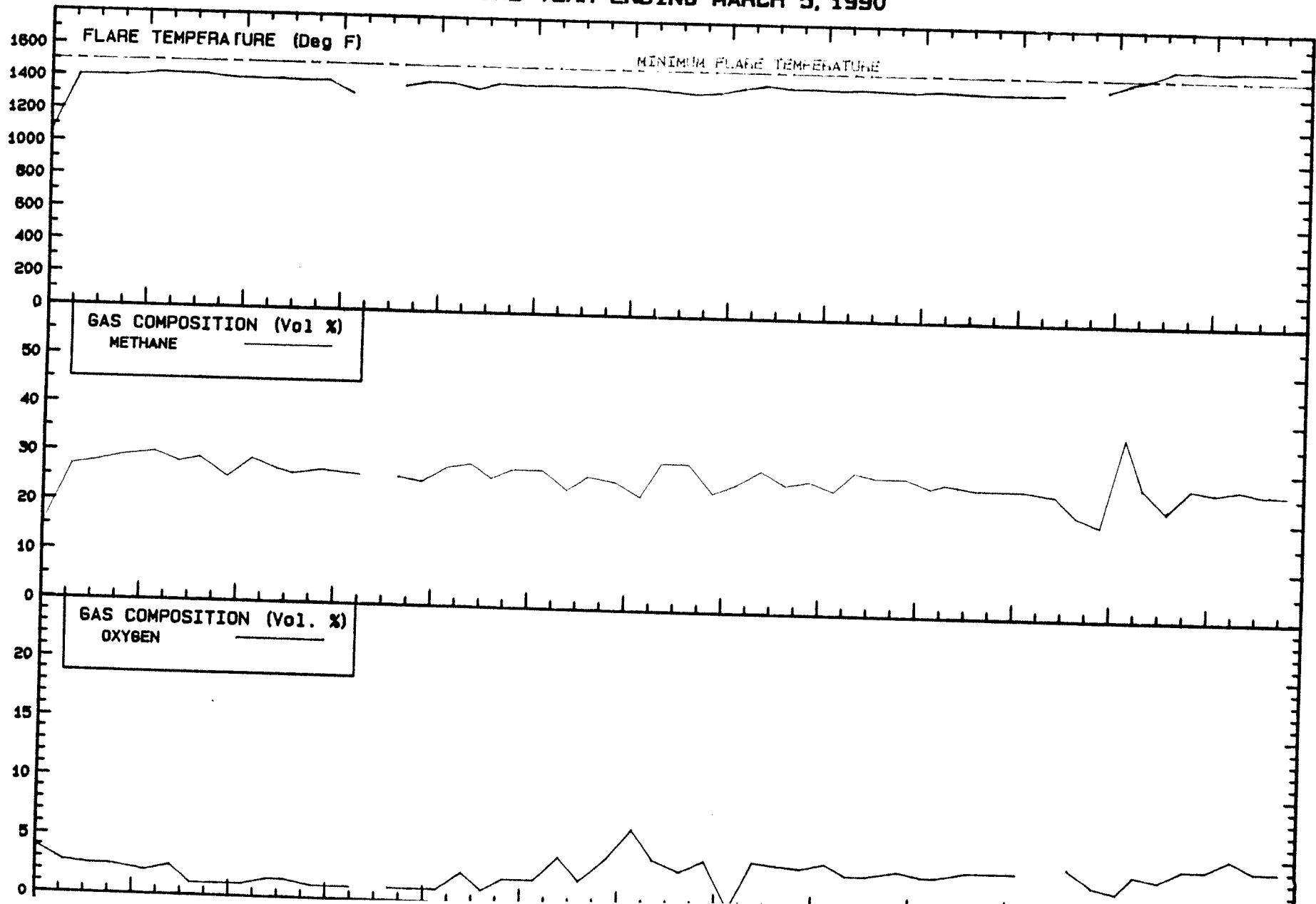
MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
11B	0	0	4.5	0	0
18B	0	0	0	TRC	0
26	0	0	0	4	0
34	0	0	0	1	0

TRC = TRACE OF CH4

#### 3. ALL PROBES

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING MARCH 5, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 3-MAR 90  
WEEKLY MONITORING PERIOD..... 7-FEB TO 28-FEB-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 2-28-90

### 1. FLARE STATION DATA

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
START TIME	—	—	0800	0800	—
TEMPERATURE (Deg F)	1564	1551	1563	1563	1560
METHANE (Vol %)	27	26	27	26	26
OXYGEN (Vol %)	4.0	4.0	5.0	4.0	4.0
VACUUM (In. H2O)	-26	-24	-18	-28	-28
BACK PRESS. (In. H2O)	12.0	13.0	29.0	17.0	18.0
GAS FLOW (In. H2O)	—	—	—	—	—

### 2. PROBLEM PROBES

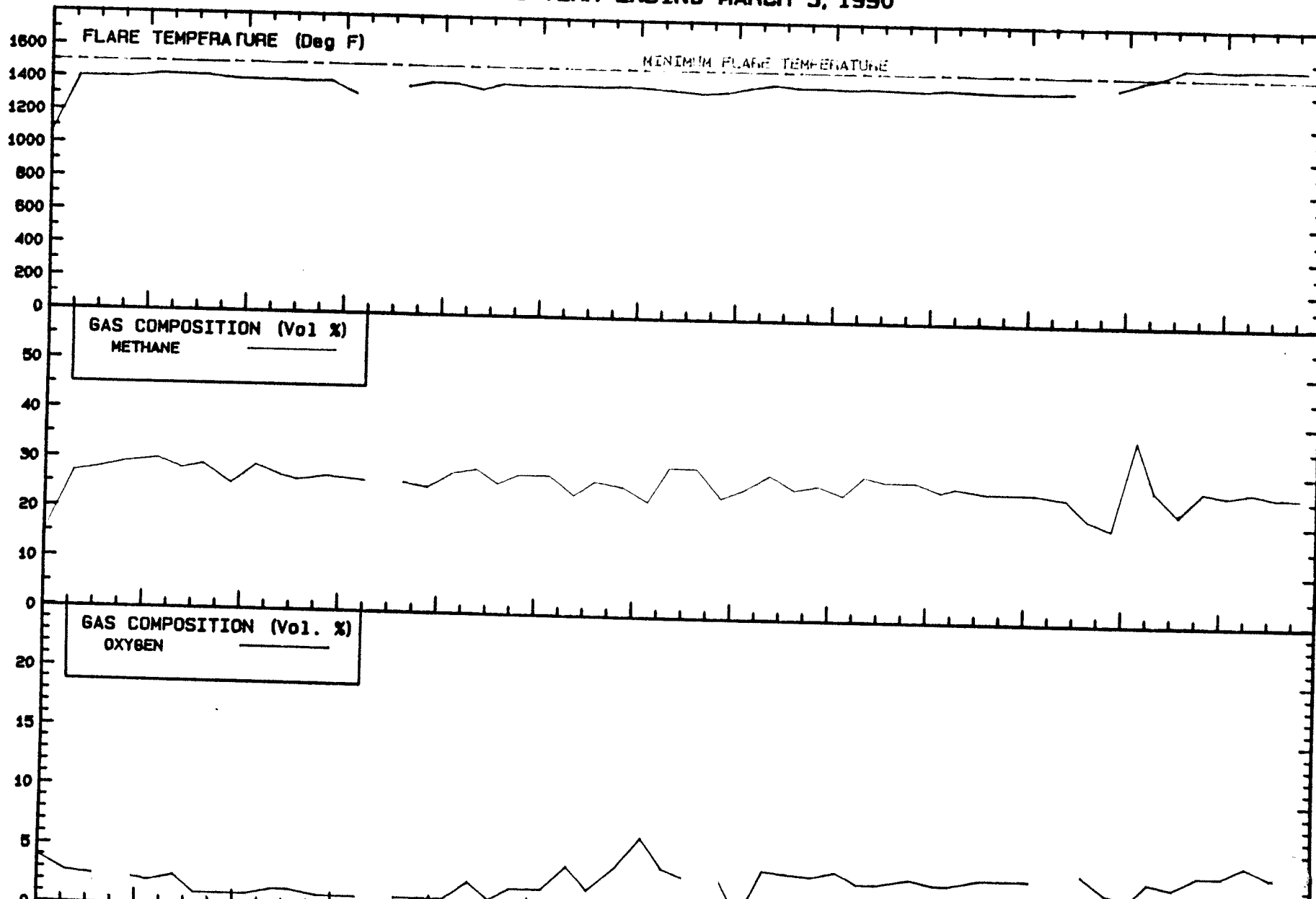
MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
11B	0	0	4.5	0	0
18B	0	0	0	TRC	0
26	0	0	0	4	0
34	0	0	0	1	0

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING MARCH 5, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 3-MAR 90  
WEEKLY MONITORING PERIOD..... 7-FEB TO 28-FEB-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 2-28-90

### 1. FLARE STATION DATA

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
START TIME	--	--	0800	0800	--
TEMPERATURE (Deg F)	1564	1551	1563	1563	1560
METHANE (Vol %)	27	26	27	26	26
OXYGEN (Vol %)	4.0	4.0	5.0	4.0	4.0
VACUUM (in. H2O)	-26	-24	-18	-28	-28
BACK PRESS. (In. H2O)	12.0	13.0	29.0	17.0	18.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

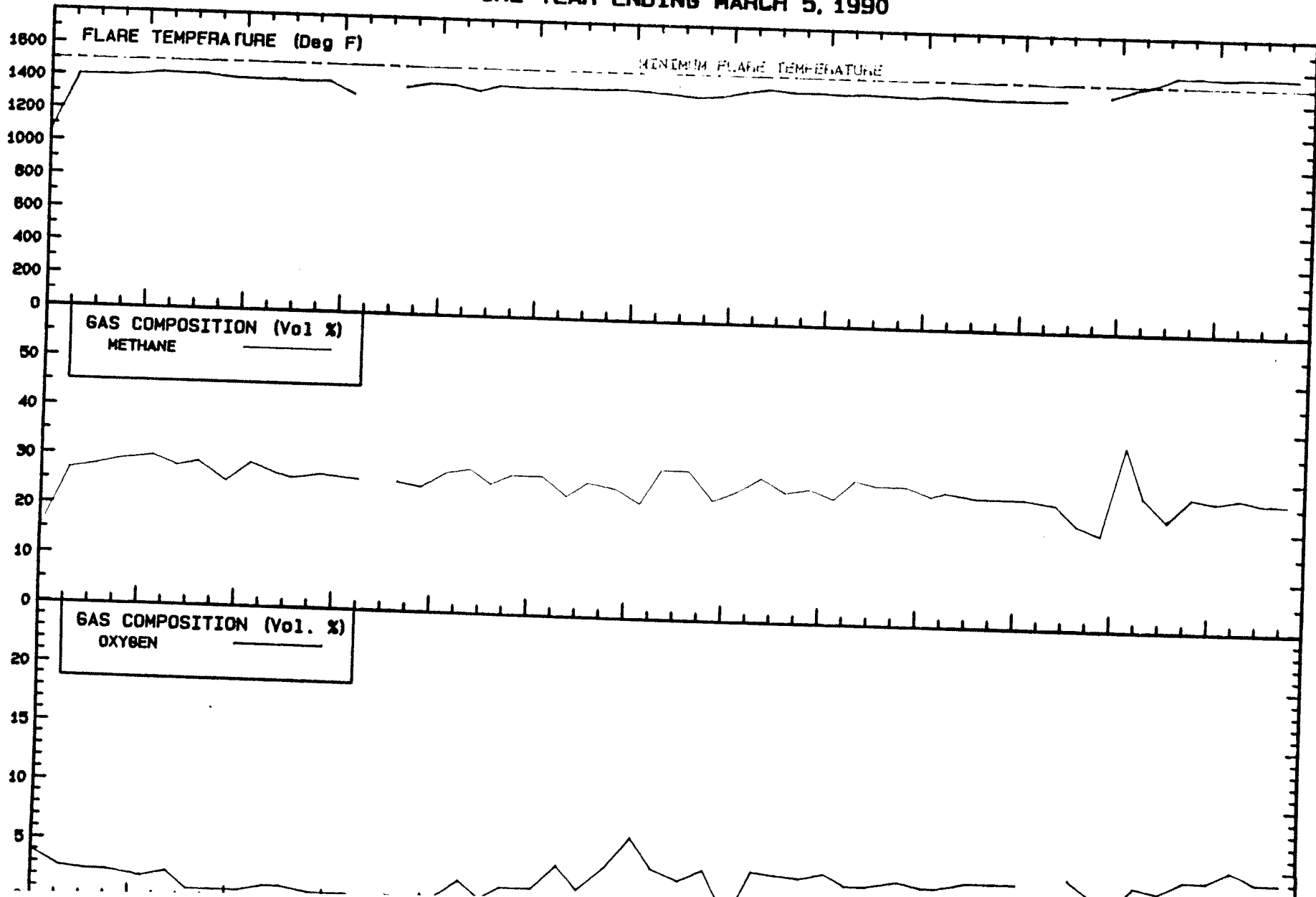
MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
11B	0	0	4.5	0	0
18B	0	0	0	TRC	0
26	0	0	0	4	0
34	0	0	0	1	0

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING MARCH 5, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 3-MAR 90  
WEEKLY MONITORING PERIOD..... 7-FEB TO 28-FEB-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 2-28-90

#### 1. FLARE STATION DATA

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
START TIME	—	—	0800	0800	—
TEMPERATURE (Deg F)	1564	1551	1563	1563	1560
METHANE (Vol %)	27	26	27	26	26
OXYGEN (Vol %)	4.0	4.0	5.0	4.0	4.0
VACUUM (In. H2O)	-26	-24	-18	-28	-28
BACK PRESS. (In. H2O)	12.0	13.0	29.0	17.0	18.0
GAS FLOW (In. H2O)	—	—	—	—	—

#### 2. PROBLEM PROBES

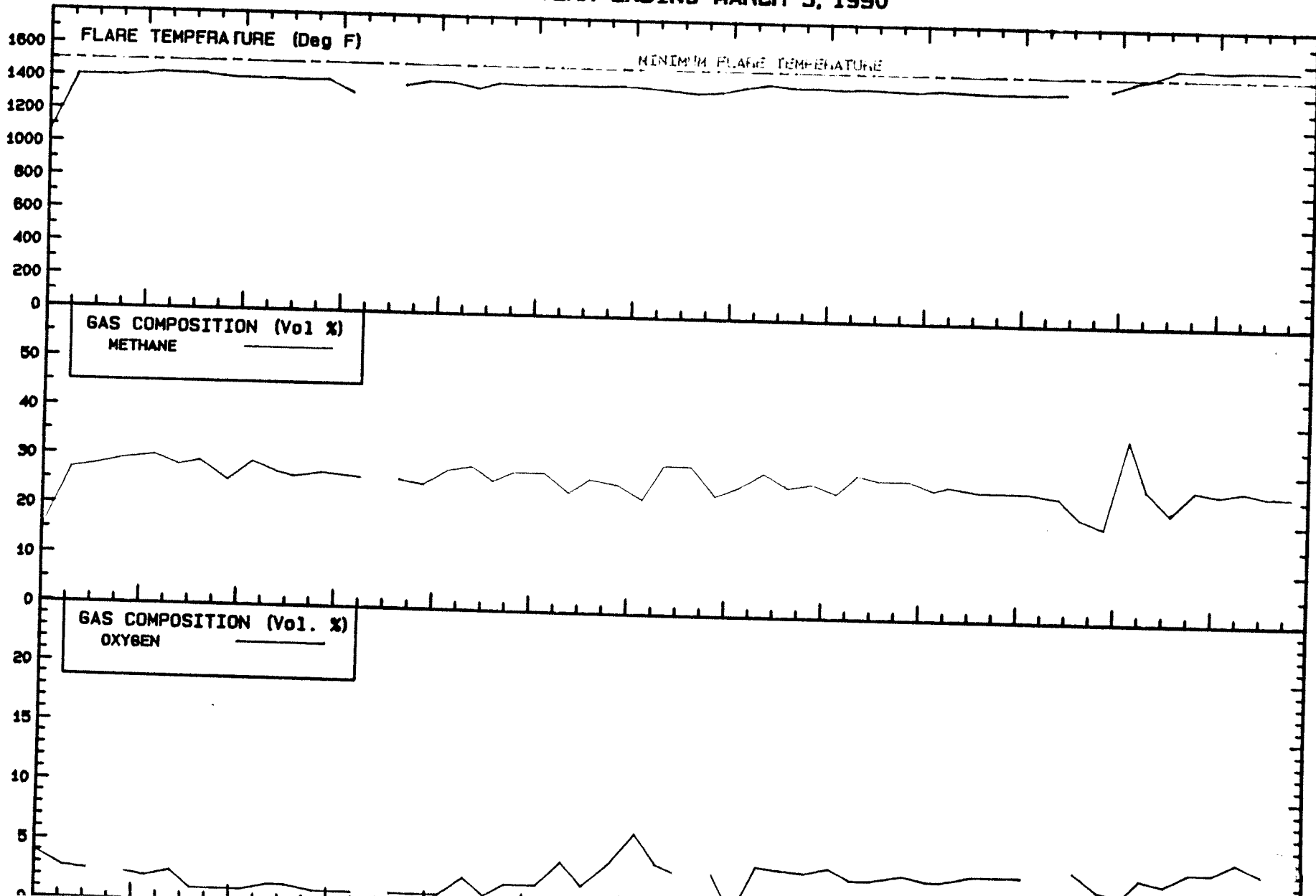
MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
11B	0	0	4.5	0	0
18B	0	0	0	TRC	0
26	0	0	0	4	0
34	0	0	0	1	0

TRC = TRACE OF CH<sub>4</sub>

#### 3. ALL PROBES

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING MARCH 5, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 3-MAR 90  
WEEKLY MONITORING PERIOD..... 7-FEB TO 28-FEB-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 2-28-90

#### 1. FLARE STATION DATA

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
START TIME	--	--	0800	0800	--
TEMPERATURE (Deg F)	1564	1551	1563	1563	1560
METHANE (Vol %)	27	26	27	26	26
OXYGEN (Vol %)	4.0	4.0	5.0	4.0	4.0
VACUUM (In. H2O)	-26	-24	-18	-28	-28
BACK PRESS. (In. H2O)	12.0	13.0	29.0	17.0	18.0
GAS FLOW (In. H2O)	--	--	--	--	--

#### 2. PROBLEM PROBES

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
11B	0	0	4.5	0	0
18B	0	0	0	TRC	0
26	0	0	0	4	0
34	0	0	0	1	0

TRC = TRACE OF CH4

#### 3. ALL PROBES

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0

# EXHIBIT A (Continued)

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	4.5	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	TRC	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	4	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0

TRC = TRACE OF CH4

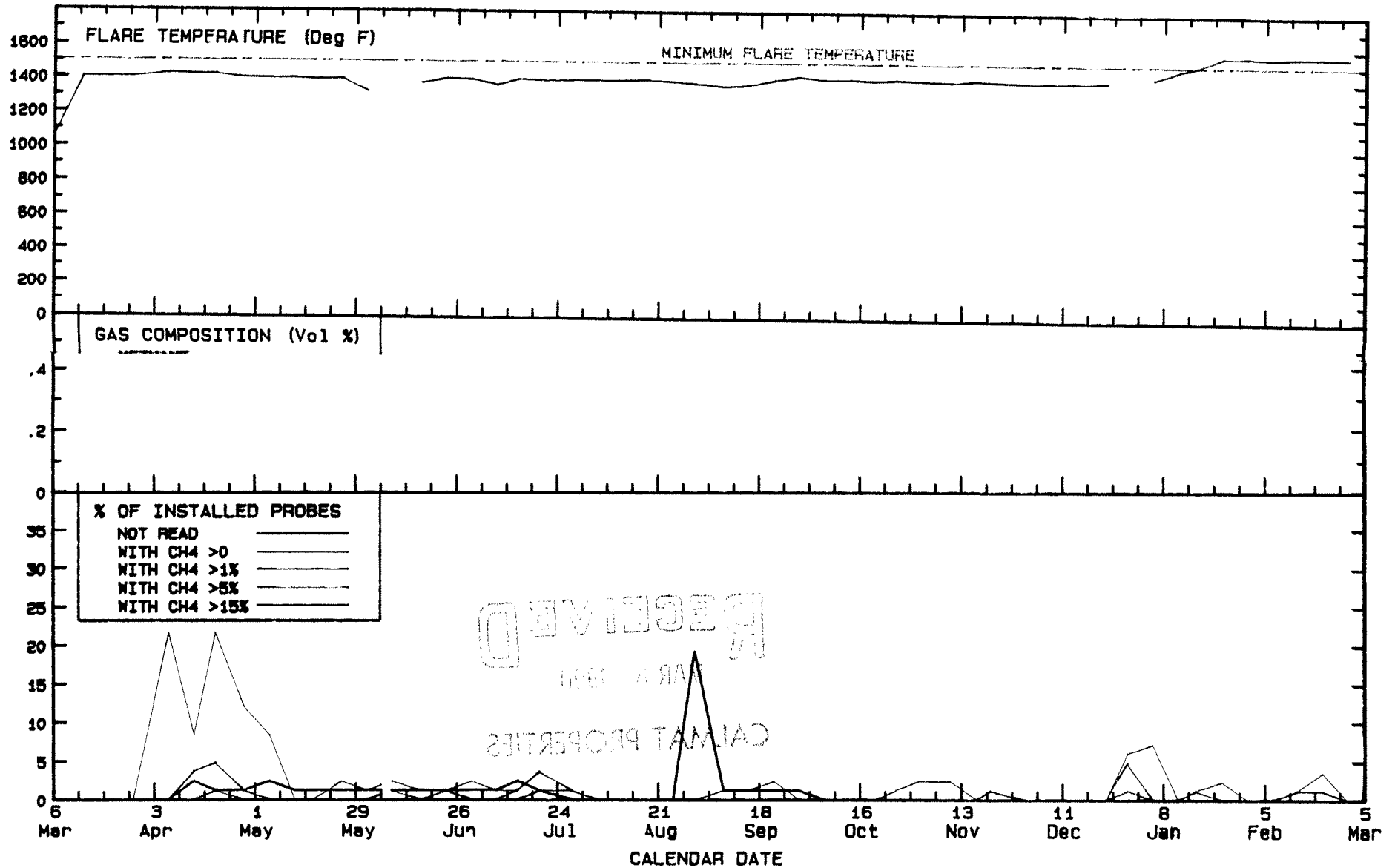
# EXHIBIT A (Continued)

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	1	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING MARCH 5, 1990**



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 3-MAR 90  
WEEKLY MONITORING PERIOD..... 7-FEB TO 28-FEB-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 2-28-90

#### 1. FLARE STATION DATA

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
START TIME	--	--	0800	0800	--
TEMPERATURE (Deg F)	1564	1551	1563	1563	1560
METHANE (Vol %)	27	26	27	26	26
OXYGEN (Vol %)	4.0	4.0	5.0	4.0	4.0
VACUUM (In. H2O)	-26	-24	-18	-28	-28
BACK PRESS. (In. H2O)	12.0	13.0	29.0	17.0	18.0
GAS FLOW (In. H2O)	--	--	--	--	--

#### 2. PROBLEM PROBES

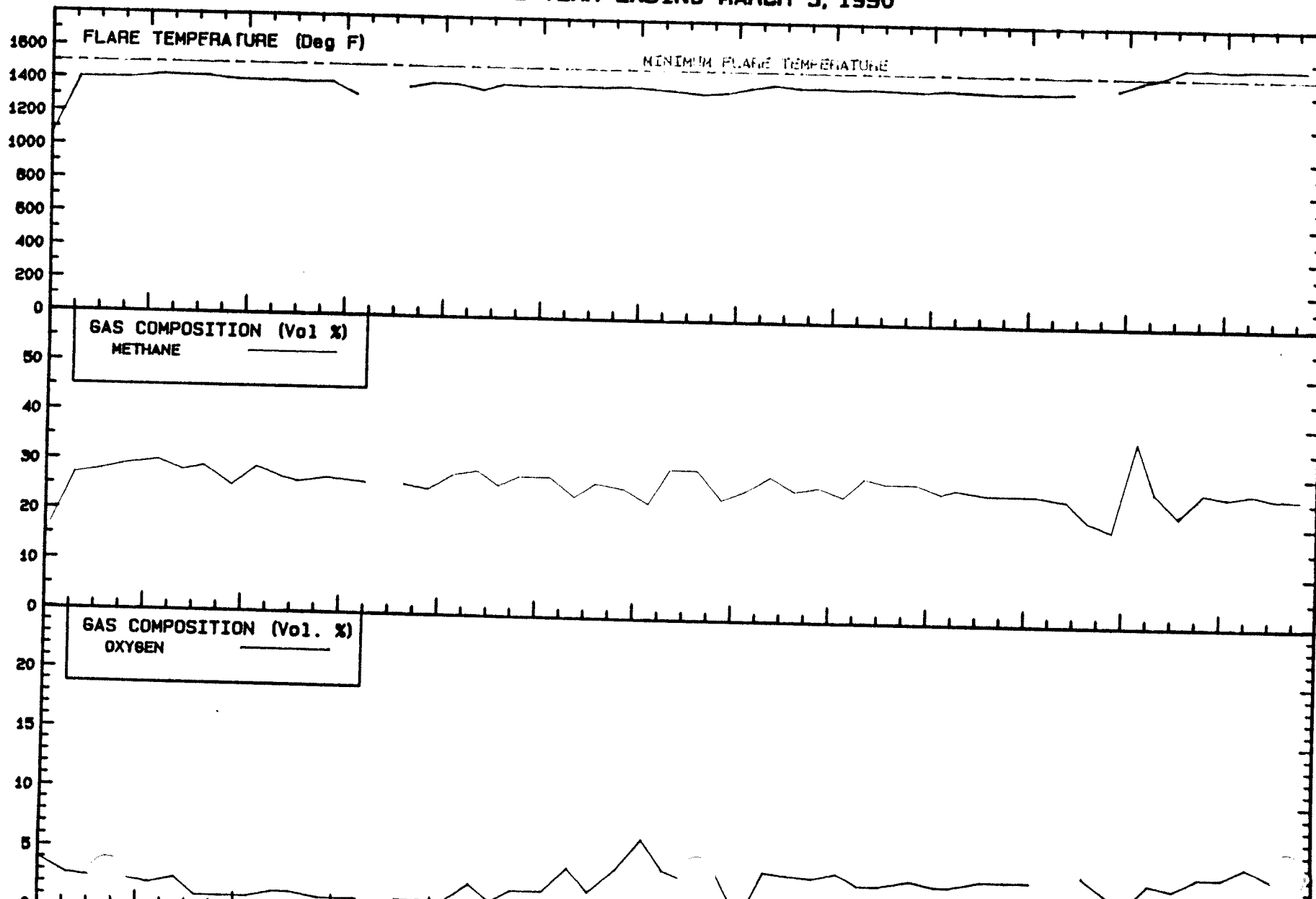
MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
11B	0	0	4.5	0	0
18B	0	0	0	TRC	0
26	0	0	0	4	0
34	0	0	0	1	0

TRC = TRACE OF CH4

#### 3. ALL PROBES

MONITORING DATE	1-31	2-7	2-14	2-21	2-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING MARCH 5, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

Mar?

REPORT DATE ..... 2-APR 90  
WEEKLY MONITORING PERIOD..... 7-APR TO 28-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	77
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	6
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#18B 1% METHANE

5 PROBES WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 3-28-90

#### 1. FLARE STATION DATA

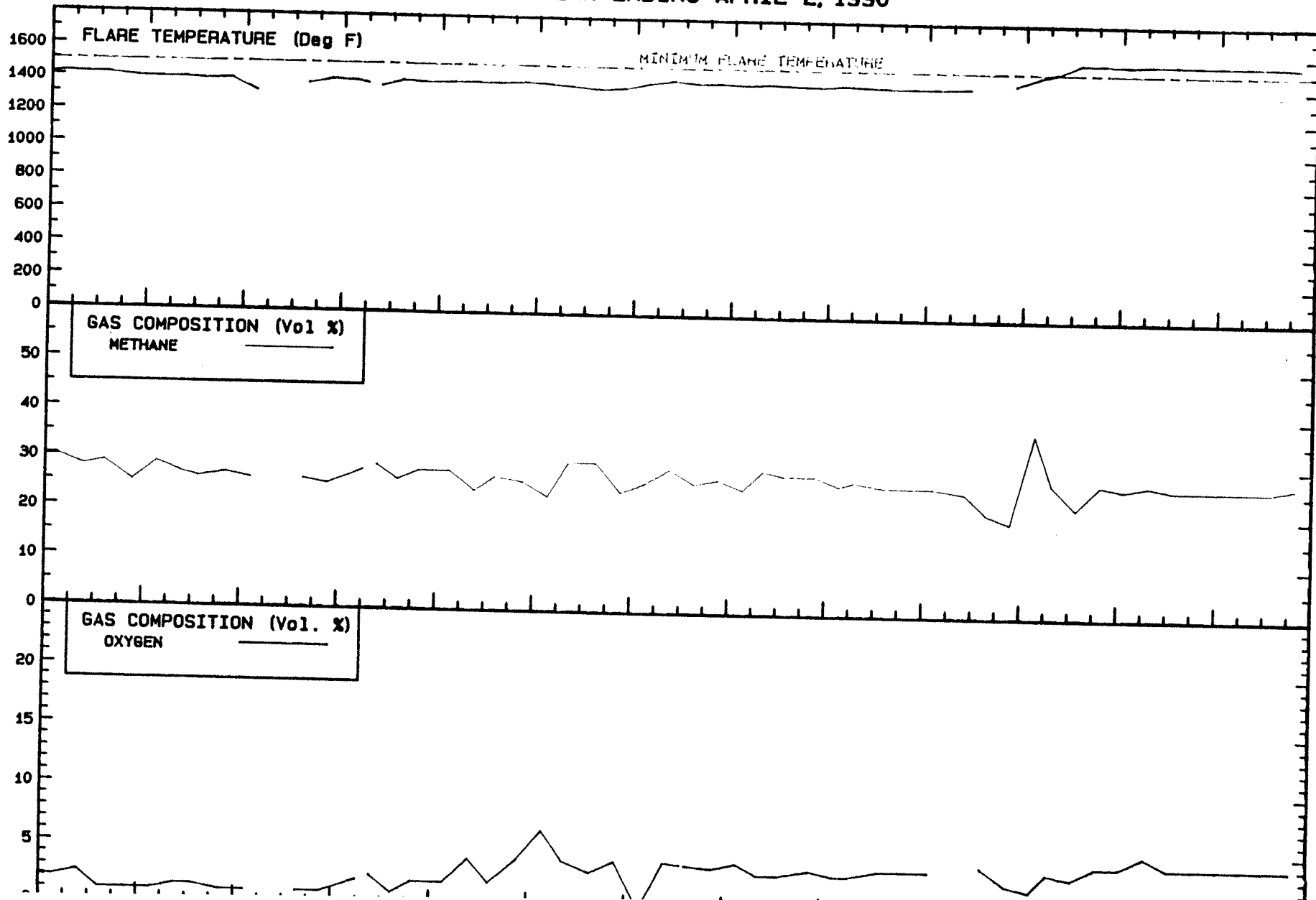
MONITORING DATE	2-28	3-7	3-14	3-21	3-28
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1560	1560	1560	1560	1555
METHANE (Vol %)	26	26	26	26	27
OXYGEN (Vol %)	4.0	4.0	4.0	4.0	4.0
VACUUM (In. H2O)	-28	-29	-29	-27	-27
BACK PRESS. (In. H2O)	18.0	20.0	20.0	17.0	19.0
GAS FLOW (In. H2O)	--	--	--	--	--

#### 2. PROBLEM PROBES

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
18B	0	0	0	0	1
25	0	0	0	0	TRC
26	0	0	0	0	TRC
B2B	0	0	0	0	TRC
B2C	0	0	0	0	TRC
B6C	0	0	0	0	TRC

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 2-APR 90  
WEEKLY MONITORING PERIOD..... 7-APR TO 28-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	77
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	6
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#18B 1% METHANE

5 PROBES WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 3-28-90

### 1. FLARE STATION DATA

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1560	1560	1560	1560	1555
METHANE (Vol %)	26	26	26	26	27
OXYGEN (Vol %)	4.0	4.0	4.0	4.0	4.0
VACUUM (In. H2O)	-28	-29	-29	-27	-27
BACK PRESS. (In. H2O)	18.0	20.0	20.0	17.0	19.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
18B	0	0	0	0	1
25	0	0	0	0	TRC
26	0	0	0	0	TRC
B2B	0	0	0	0	TRC
B2C	0	0	0	0	TRC
B6C	0	0	0	0	TRC

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	1
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0

# EXHIBIT A (Continued)

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
24A	0	0	0	0	0
25	0	0	0	0	TRC
26	0	0	0	0	TRC
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	TRC
B2C	0	0	0	0	TRC
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	TRC

TRC = TRACE OF CH4

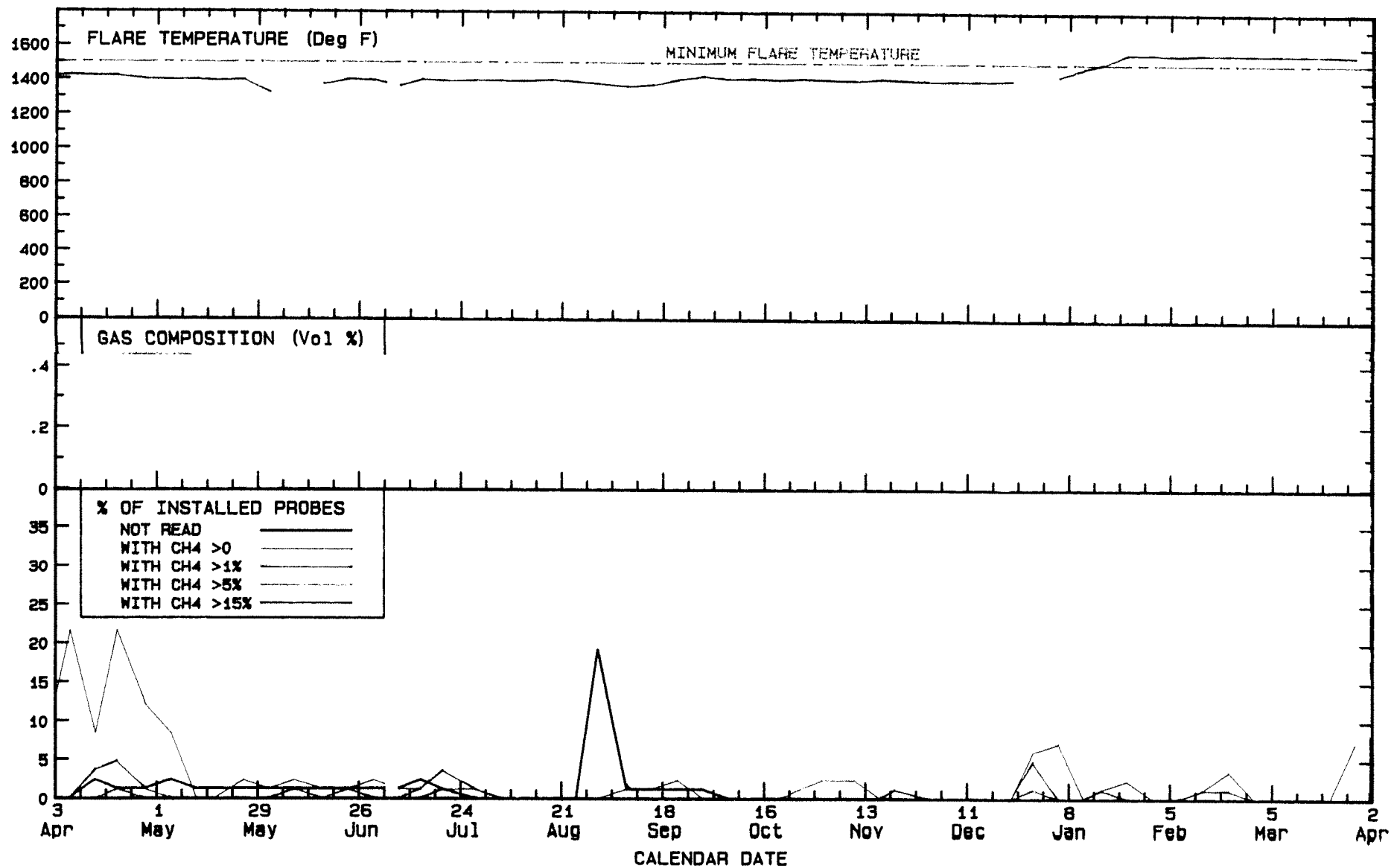
EXHIBIT A (Continued)

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 2-APR 90  
WEEKLY MONITORING PERIOD..... 7-APR TO 28-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	77
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	6
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#18B 1% METHANE

5 PROBES WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 3-28-90

#### 1. FLARE STATION DATA

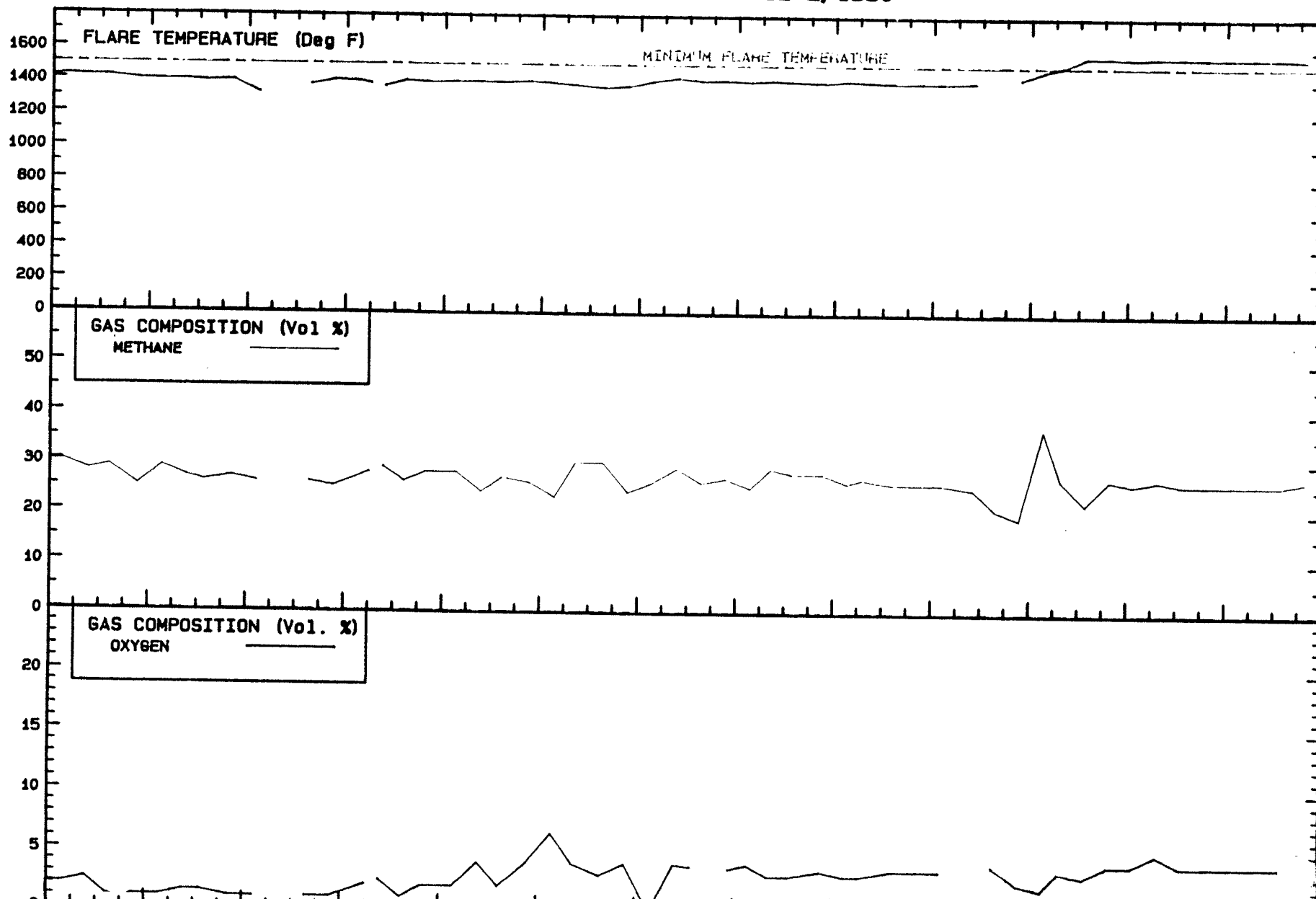
MONITORING DATE	2-28	3-7	3-14	3-21	3-28
START TIME	—	—	—	—	—
TEMPERATURE (Deg F)	1560	1560	1560	1560	1555
METHANE (Vol %)	26	26	26	26	27
OXYGEN (Vol %)	4.0	4.0	4.0	4.0	4.0
VACUUM (In. H2O)	-28	-29	-29	-27	-27
BACK PRESS. (In. H2O)	18.0	20.0	20.0	17.0	19.0
GAS FLOW (In. H2O)	—	—	—	—	—

#### 2. PROBLEM PROBES

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
18B	0	0	0	0	1
25	0	0	0	0	TRC
26	0	0	0	0	TRC
B2B	0	0	0	0	TRC
B2C	0	0	0	0	TRC
B6C	0	0	0	0	TRC

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 2-APR 90  
WEEKLY MONITORING PERIOD..... 7-APR TO 28-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	77
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	6
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#18B 1% METHANE

5 PROBES WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 3-28-90

#### 1. FLARE STATION DATA

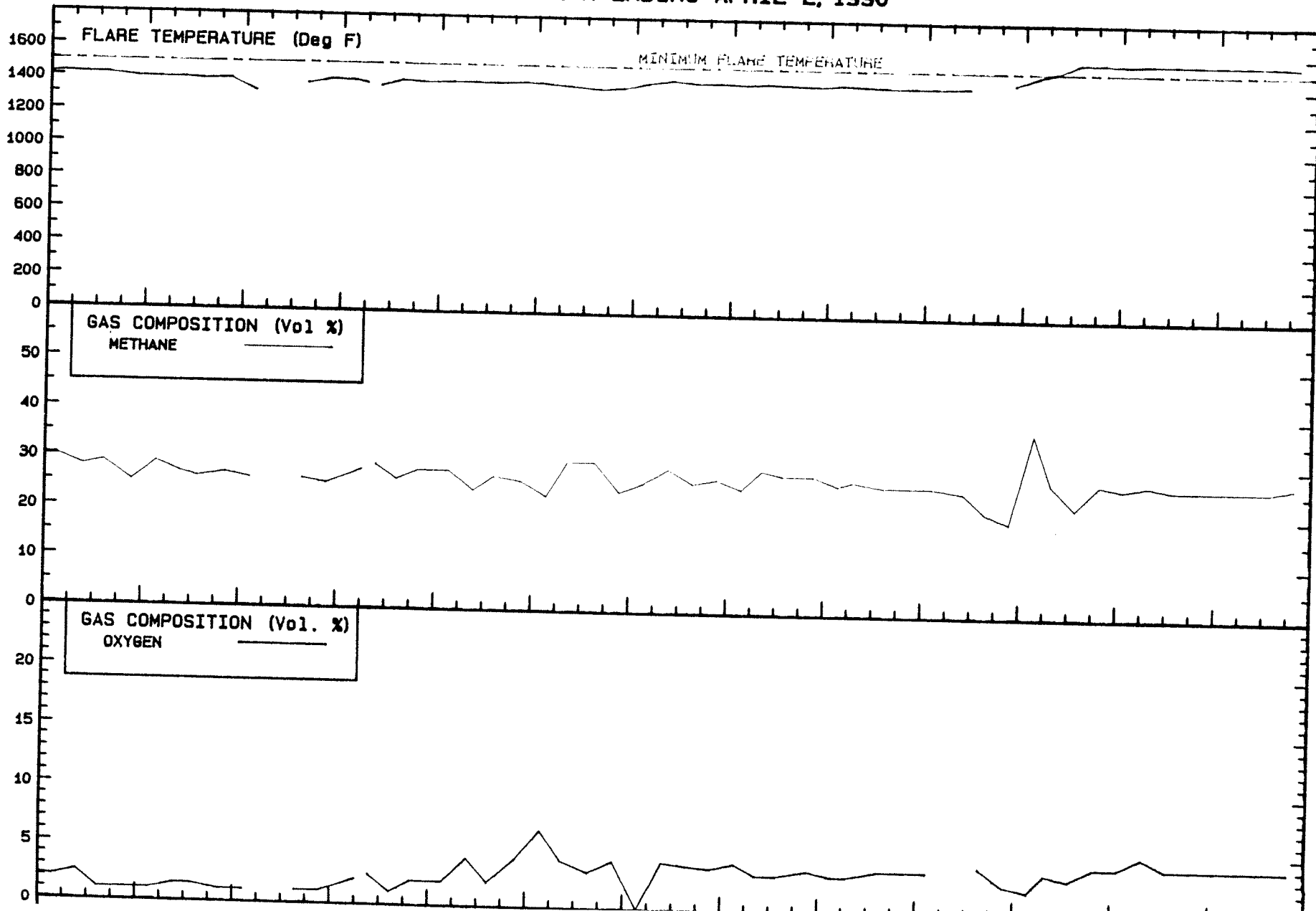
MONITORING DATE	2-28	3-7	3-14	3-21	3-28
START TIME	—	—	—	—	—
TEMPERATURE (Deg F)	1560	1560	1560	1560	1555
METHANE (Vol %)	26	26	26	26	27
OXYGEN (Vol %)	4.0	4.0	4.0	4.0	4.0
VACUUM (In. H2O)	-28	-29	-29	-27	-27
BACK PRESS. (In. H2O)	18.0	20.0	20.0	17.0	19.0
GAS FLOW (In. H2O)	—	—	—	—	—

#### 2. PROBLEM PROBES

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
18B	0	0	0	0	1
25	0	0	0	0	TRC
26	0	0	0	0	TRC
B2B	0	0	0	0	TRC
B2C	0	0	0	0	TRC
B6C	0	0	0	0	TRC

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 2-APR 90  
WEEKLY MONITORING PERIOD..... 7-APR TO 28-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	77
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	6
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#18B 1% METHANE

5 PROBES WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 3-28-90

### 1. FLARE STATION DATA

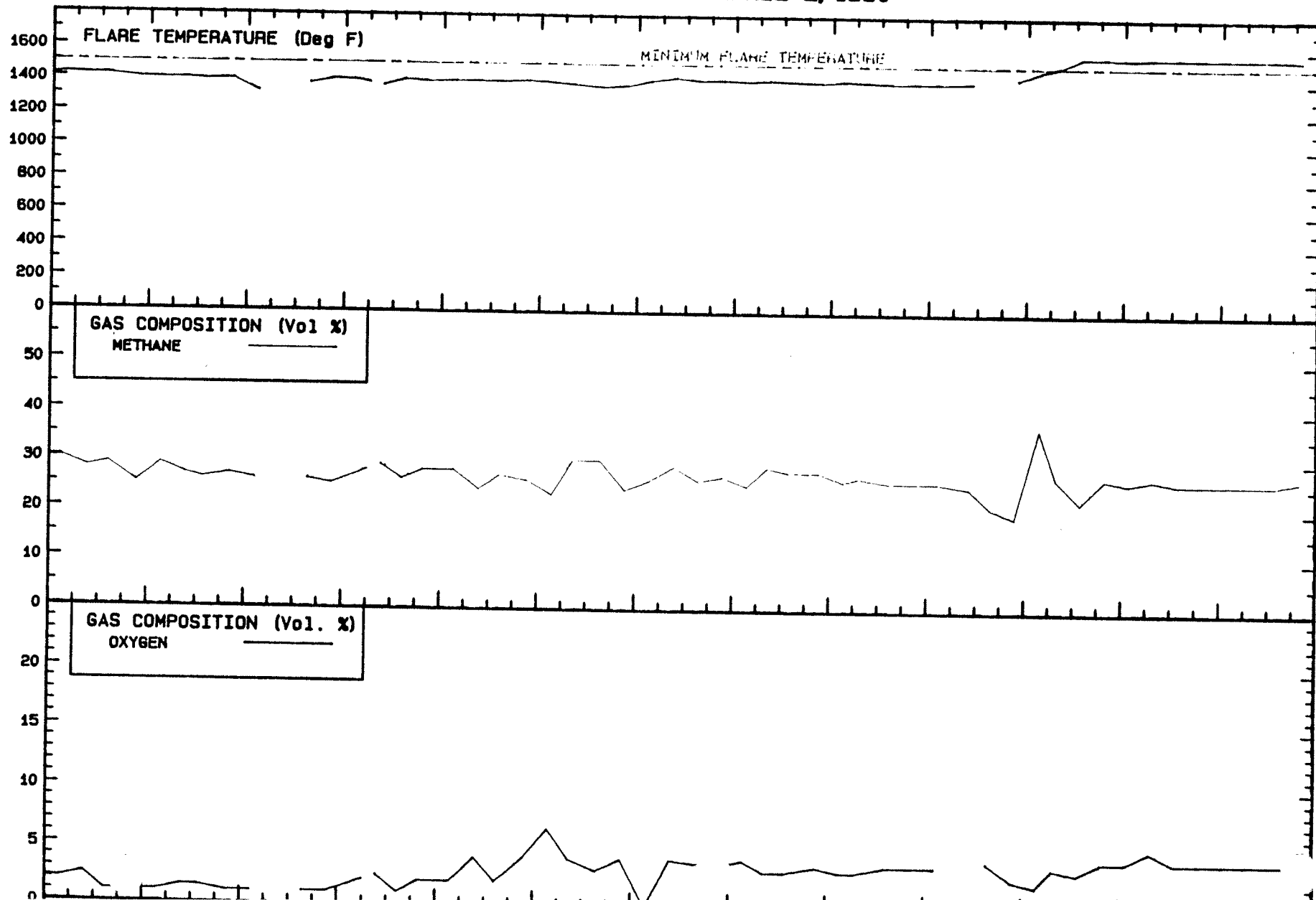
MONITORING DATE	2-28	3-7	3-14	3-21	3-28
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1560	1560	1560	1560	1555
METHANE (Vol %)	26	26	26	26	27
OXYGEN (Vol %)	4.0	4.0	4.0	4.0	4.0
VACUUM (In. H2O)	-28	-29	-29	-27	-27
BACK PRESS. (In. H2O)	18.0	20.0	20.0	17.0	19.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
18B	0	0	0	0	1
25	0	0	0	0	TRC
26	0	0	0	0	TRC
B2B	0	0	0	0	TRC
B2C	0	0	0	0	TRC
B6C	0	0	0	0	TRC

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 2-APR 90  
WEEKLY MONITORING PERIOD..... 7-APR TO 28-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	77
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	6
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

#18B 1% METHANE

5 PROBES WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 3-28-90

#### 1. FLARE STATION DATA

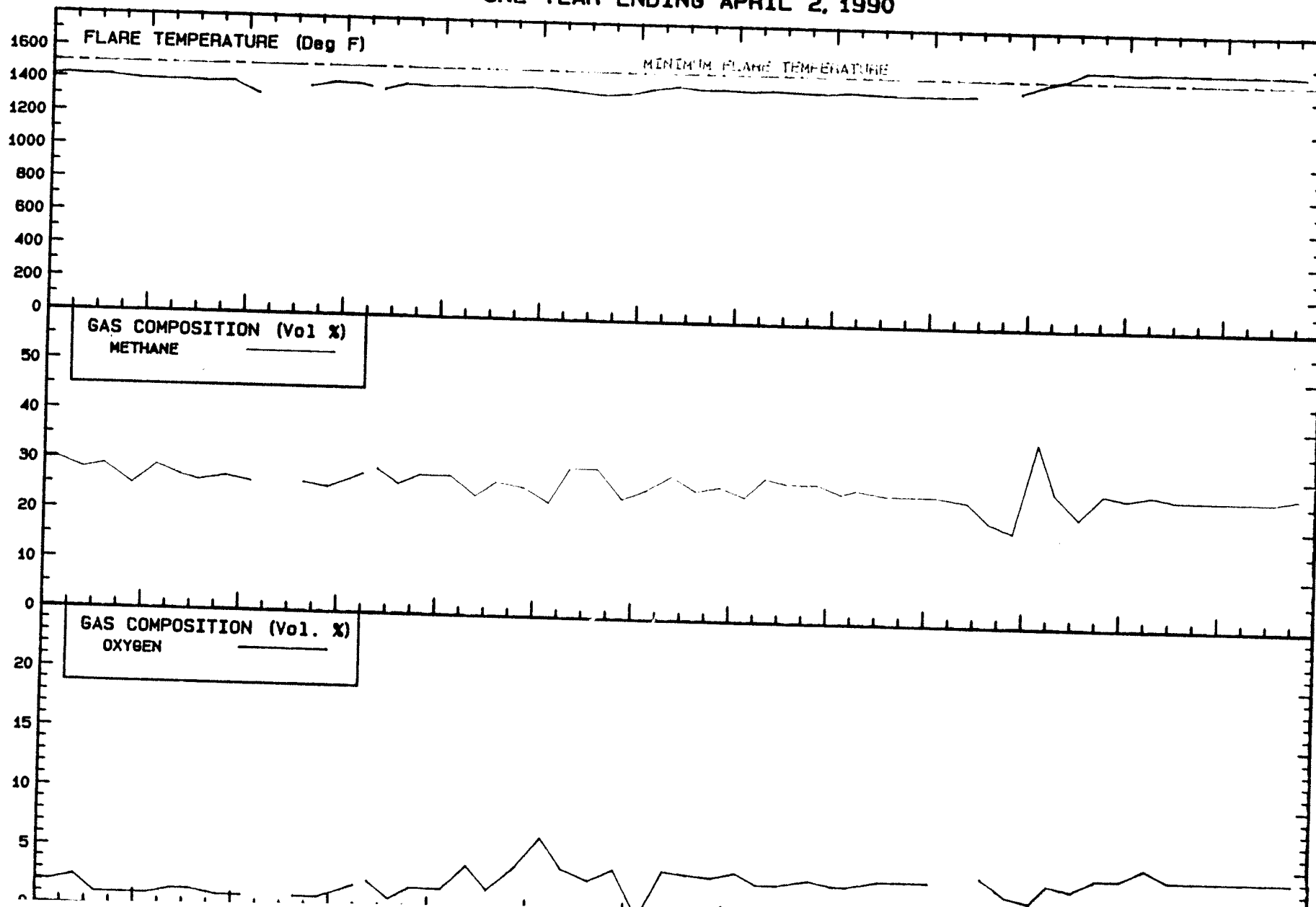
MONITORING DATE	2-28	3-7	3-14	3-21	3-28
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1560	1560	1560	1560	1555
METHANE (Vol %)	26	26	26	26	27
OXYGEN (Vol %)	4.0	4.0	4.0	4.0	4.0
VACUUM (In. H2O)	-28	-29	-29	-27	-27
BACK PRESS. (In. H2O)	18.0	20.0	20.0	17.0	19.0
GAS FLOW (In. H2O)	--	--	--	--	--

#### 2. PROBLEM PROBES

MONITORING DATE	2-28	3-7	3-14	3-21	3-28
PROBE	VOLUME % METHANE				
18B	0	0	0	0	1
25	0	0	0	0	TRC
26	0	0	0	0	TRC
B2B	0	0	0	0	TRC
B2C	0	0	0	0	TRC
B6C	0	0	0	0	TRC

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 27-APR 90  
WEEKLY MONITORING PERIOD..... 4-APR TO 25-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

1 PROBE WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 4-25-90

### 1. FLARE STATION DATA

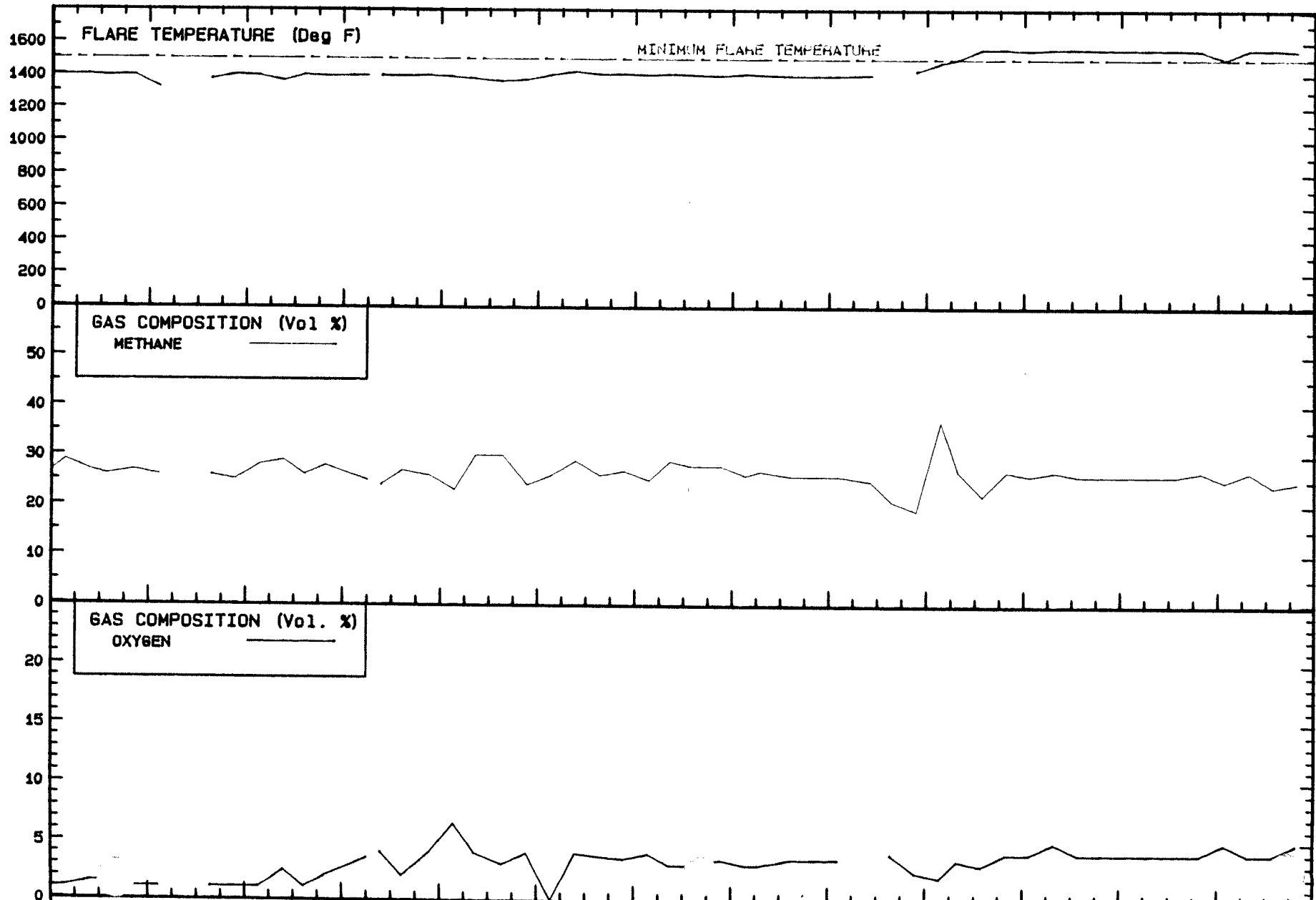
MONITORING DATE	3-28	4-4	4-11	4-18	4-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1501	1561	1564	1555
METHANE (Vol %)	27	25	27	24	25
OXYGEN (Vol %)	4.0	5.0	4.0	4.0	5.0
VACUUM (In. H2O)	-27	-25	-25	-29	-24
BACK PRESS. (In. H2O)	19.0	20.0	26.0	23.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
18B	1	0	0	0	0
24	0	0	0	1	TRC
25	TRC	0	0	0	0
26	TRC	0	TRC	0	0
26A	0	0	0	0.25	0
B2B	TRC	0	TRC	0	0
B2C	TRC	0	0	0	0
B6B	0	0	0	4	0
B6C	TRC	0	0	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 27-APR 90  
WEEKLY MONITORING PERIOD..... 4-APR TO 25-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

1 PROBE WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 4-25-90

### 1. FLARE STATION DATA

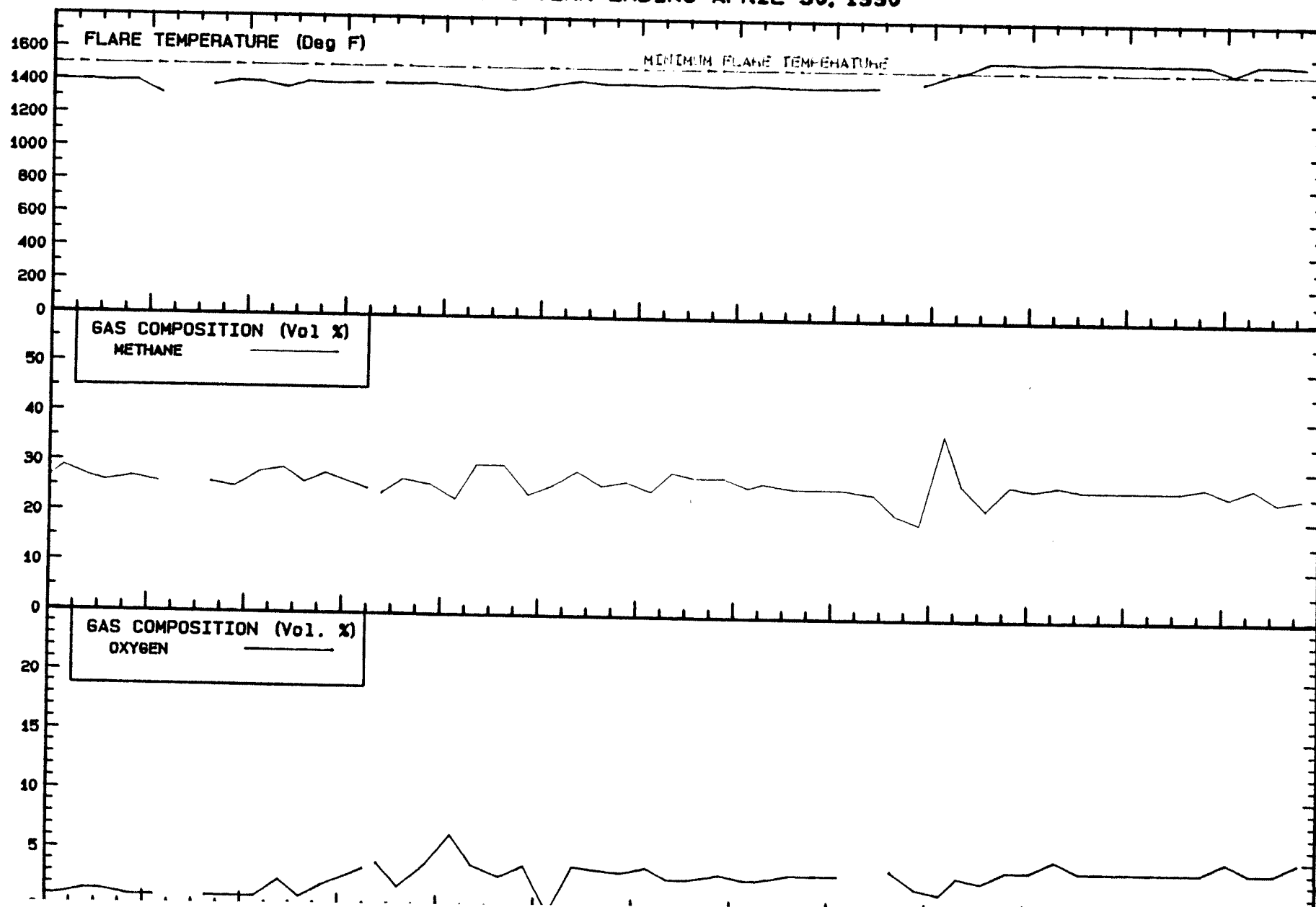
MONITORING DATE	3-28	4-4	4-11	4-18	4-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1501	1561	1564	1555
METHANE (Vol %)	27	25	27	24	25
OXYGEN (Vol %)	4.0	5.0	4.0	4.0	5.0
VACUUM (In. H2O)	-27	-25	-25	-29	-24
BACK PRESS. (In. H2O)	19.0	20.0	26.0	23.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
18B	1	0	0	0	0
24	0	0	0	1	TRC
25	TRC	0	0	0	0
26	TRC	0	TRC	0	0
26A	0	0	0	0.25	0
B2B	TRC	0	TRC	0	0
B2C	TRC	0	0	0	0
B6B	0	0	0	4	0
B6C	TRC	0	0	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 30, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 27-APR 90  
WEEKLY MONITORING PERIOD..... 4-APR TO 25-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

1 PROBE WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 4-25-90

### 1. FLARE STATION DATA

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1501	1561	1564	1555
METHANE (Vol %)	27	25	27	24	25
OXYGEN (Vol %)	4.0	5.0	4.0	4.0	5.0
VACUUM (In. H2O)	-27	-25	-25	-29	-24
BACK PRESS. (In. H2O)	19.0	20.0	26.0	23.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
18B	1	0	0	0	0
24	0	0	0	1	TRC
25	TRC	0	0	0	0
26	TRC	0	TRC	0	0
26A	0	0	0	0.25	0
B2B	TRC	0	TRC	0	0
B2C	TRC	0	0	0	0
B6B	0	0	0	4	0
B6C	TRC	0	0	0	0

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	1	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	1	TRC

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
24A	0	0	0	0	0
25	TRC	0	0	0	0
26	TRC	0	TRC	0	0
26A	0	0	0	0.25	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	TRC	0	TRC	0	0
B2C	TRC	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	4	0
B6C	TRC	0	0	0	0

TRC = TRACE OF CH4

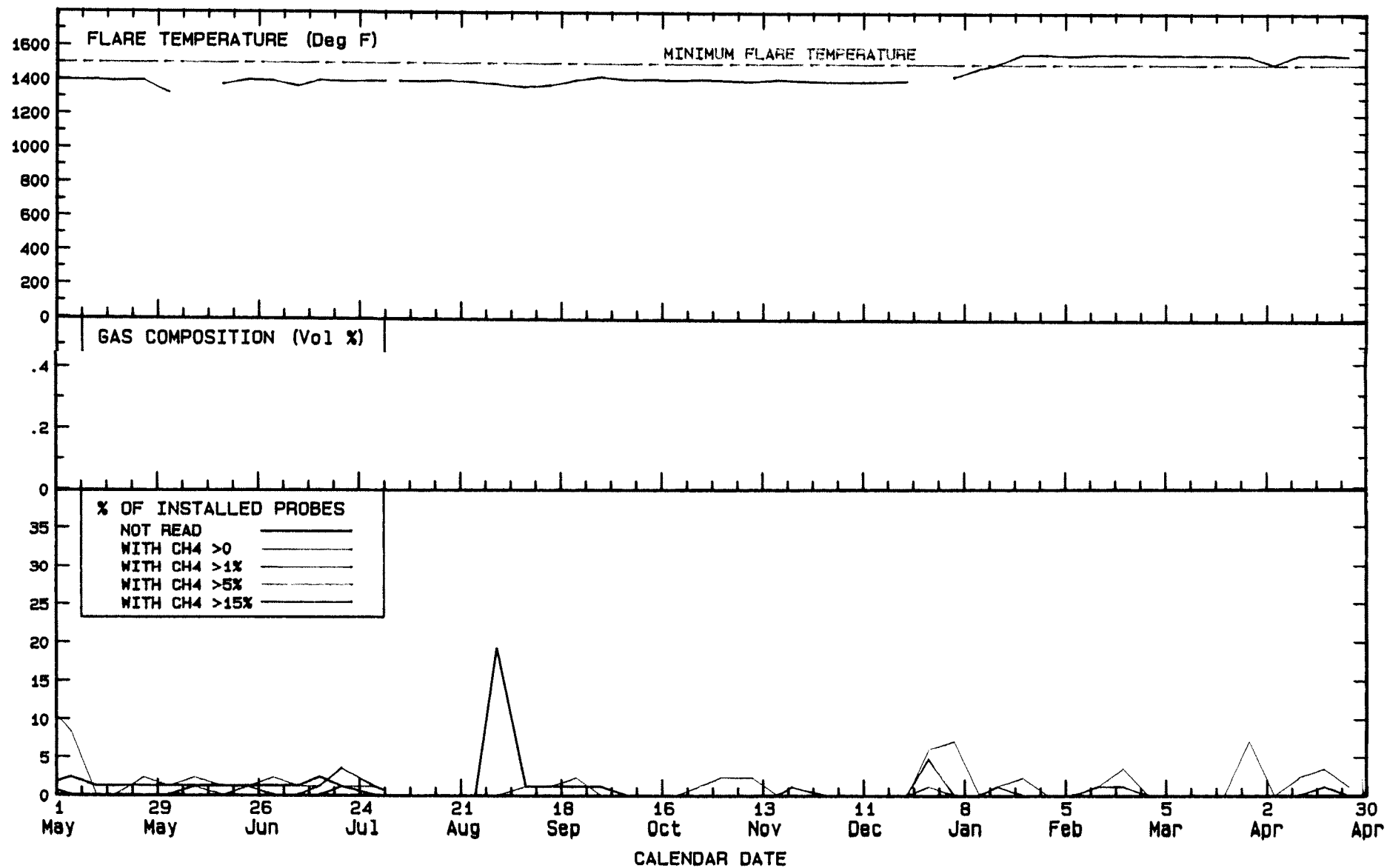
EXHIBIT A (Continued)

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING APRIL 30, 1990**



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 27-APR 90  
WEEKLY MONITORING PERIOD..... 4-APR TO 25-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

1 PROBE WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 4-25-90

### 1. FLARE STATION DATA

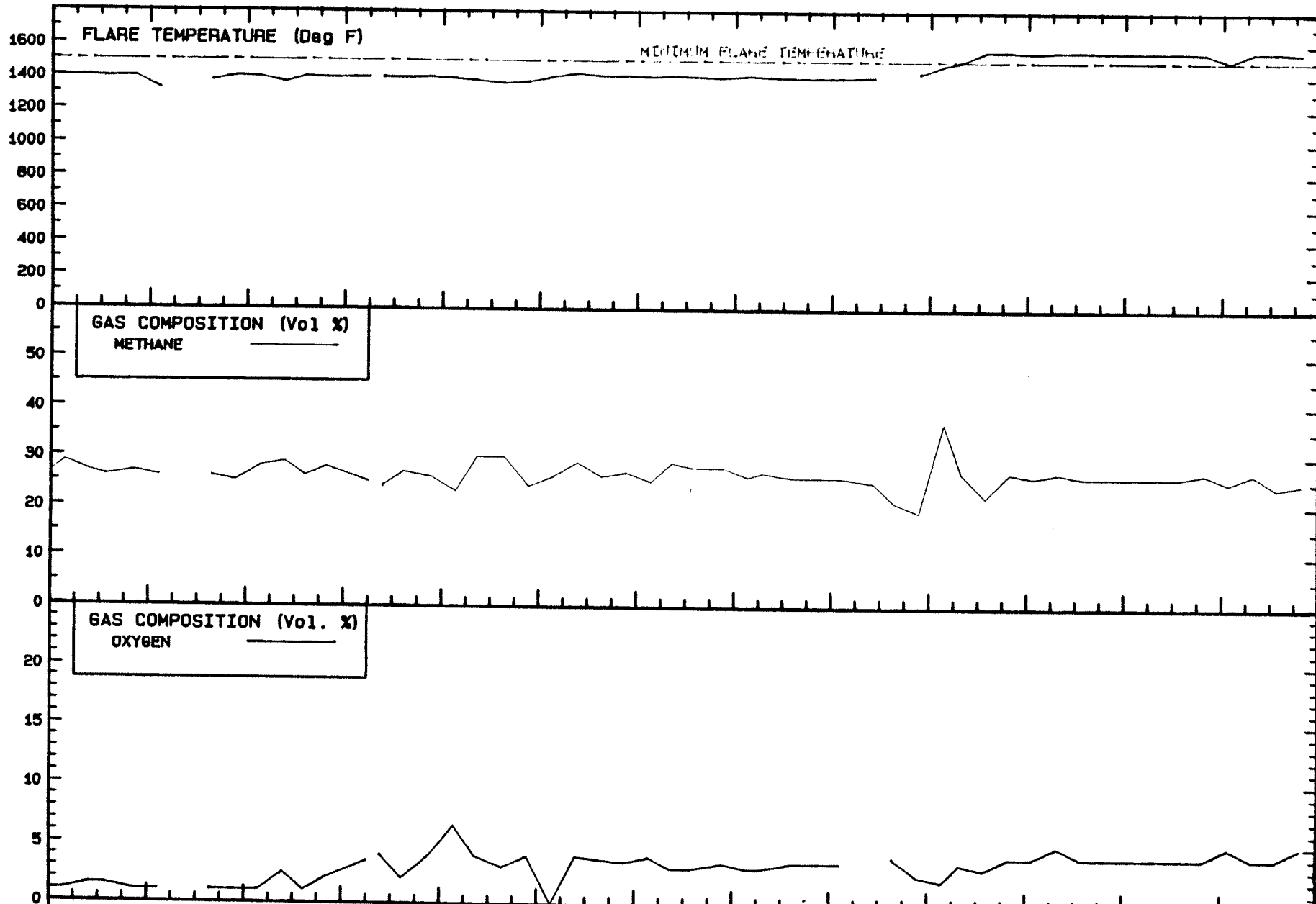
MONITORING DATE	3-28	4-4	4-11	4-18	4-25
START TIME	—	—	—	—	—
TEMPERATURE (Deg F)	1555	1501	1561	1564	1555
METHANE (Vol %)	27	25	27	24	25
OXYGEN (Vol %)	4.0	5.0	4.0	4.0	5.0
VACUUM (In. H2O)	-27	-25	-25	-29	-24
BACK PRESS. (In. H2O)	19.0	20.0	26.0	23.0	23.0
GAS FLOW (In. H2O)	—	—	—	—	—

### 2. PROBLEM PROBES

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
18B	1	0	0	0	0
24	0	0	0	1	TRC
25	TRC	0	0	0	0
26	TRC	0	TRC	0	0
26A	0	0	0	0.25	0
B2B	TRC	0	TRC	0	0
B2C	TRC	0	0	0	0
B6B	0	0	0	4	0
B6C	TRC	0	0	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 27-APR 90  
WEEKLY MONITORING PERIOD..... 4-APR TO 25-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

1 PROBE WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 4-25-90

### 1. FLARE STATION DATA

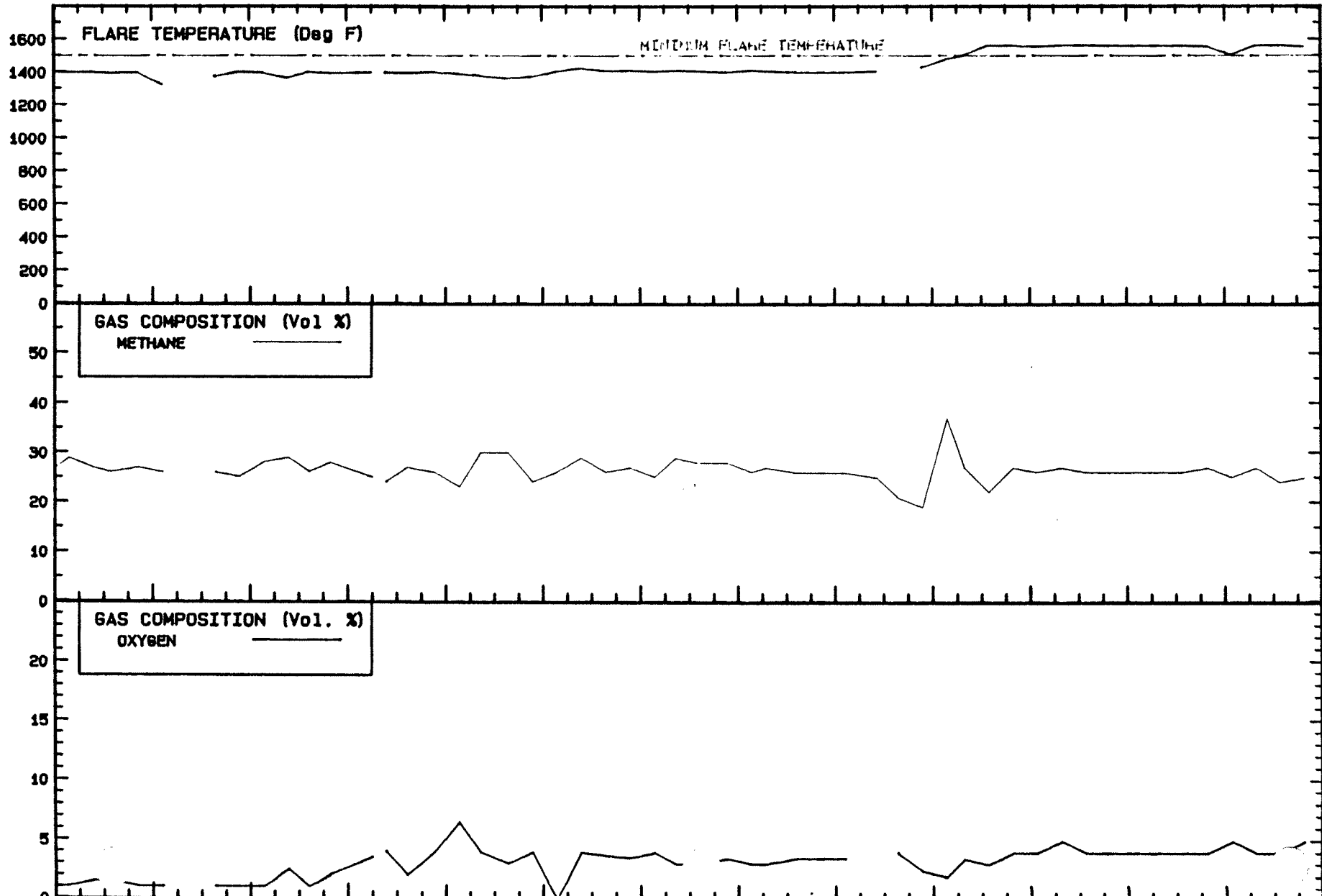
MONITORING DATE	3-28	4-4	4-11	4-18	4-25
START TIME	—	—	—	—	—
TEMPERATURE (Deg F)	1555	1501	1561	1564	1555
METHANE (Vol %)	27	25	27	24	25
OXYGEN (Vol %)	4.0	5.0	4.0	4.0	5.0
VACUUM (In. H2O)	-27	-25	-25	-29	-24
BACK PRESS. (In. H2O)	19.0	20.0	26.0	23.0	23.0
GAS FLOW (In. H2O)	—	—	—	—	—

### 2. PROBLEM PROBES

MONITORING DATE	3-28	4-4	4-11	4-18	4-25
PROBE	VOLUME % METHANE				
18B	1	0	0	0	0
24	0	0	0	1	TRC
25	TRC	0	0	0	0
26	TRC	0	TRC	0	0
26A	0	0	0	0.25	0
B2B	TRC	0	TRC	0	0
B2C	TRC	0	0	0	0
B6B	0	0	0	4	0
B6C	TRC	0	0	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 27-APR 90  
WEEKLY MONITORING PERIOD..... 4-APR TO 25-APR-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

1 PROBE WITH TRACE METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

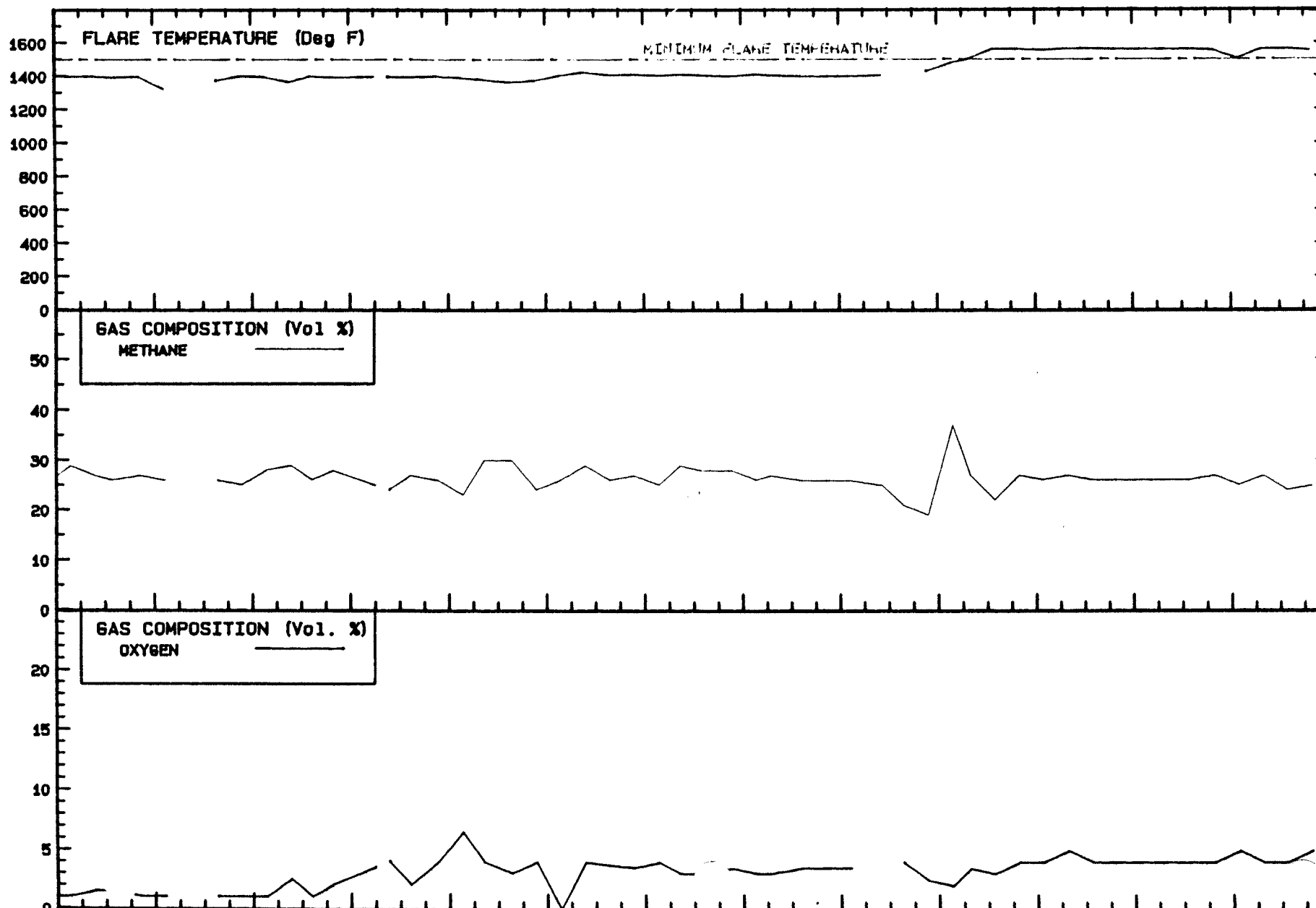
NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING APRIL 30, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6-JUN 90  
WEEKLY MONITORING PERIOD..... 2-MAY TO 30-MAY-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 5-30-90

### 1. FLARE STATION DATA

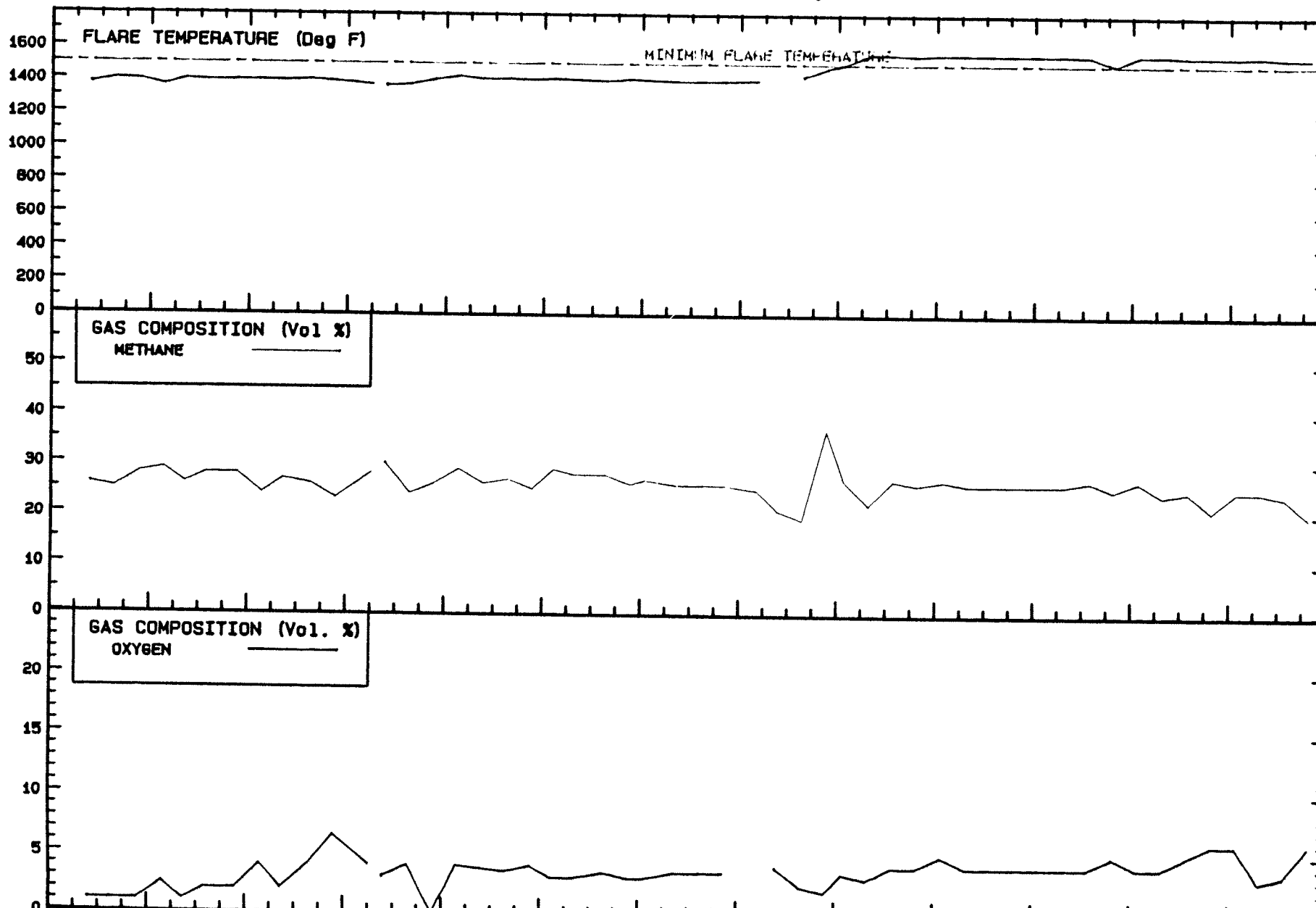
MONITORING DATE	5-2	5-9	5-16	5-23	5-30
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1552	1560	1549	1550
METHANE (Vol %)	21	25	25	24	20
OXYGEN (Vol %)	6.0	6.0	3.0	3.5	6.0
VACUUM (In. H2O)	-24	-22.5	-22	-24	-24
BACK PRESS. (In. H2O)	23.0	30.0	23.0	20.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
24	3	2	5	0	0
B3B	0	0.2	0	0	0
B6B	0	0	TRC	0	0
B6C	0	0	TRC	0	0
B7C	0	0	TRC	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JUNE 4, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6-JUN 90  
WEEKLY MONITORING PERIOD..... 2-MAY TO 30-MAY-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 5-30-90

### 1. FLARE STATION DATA

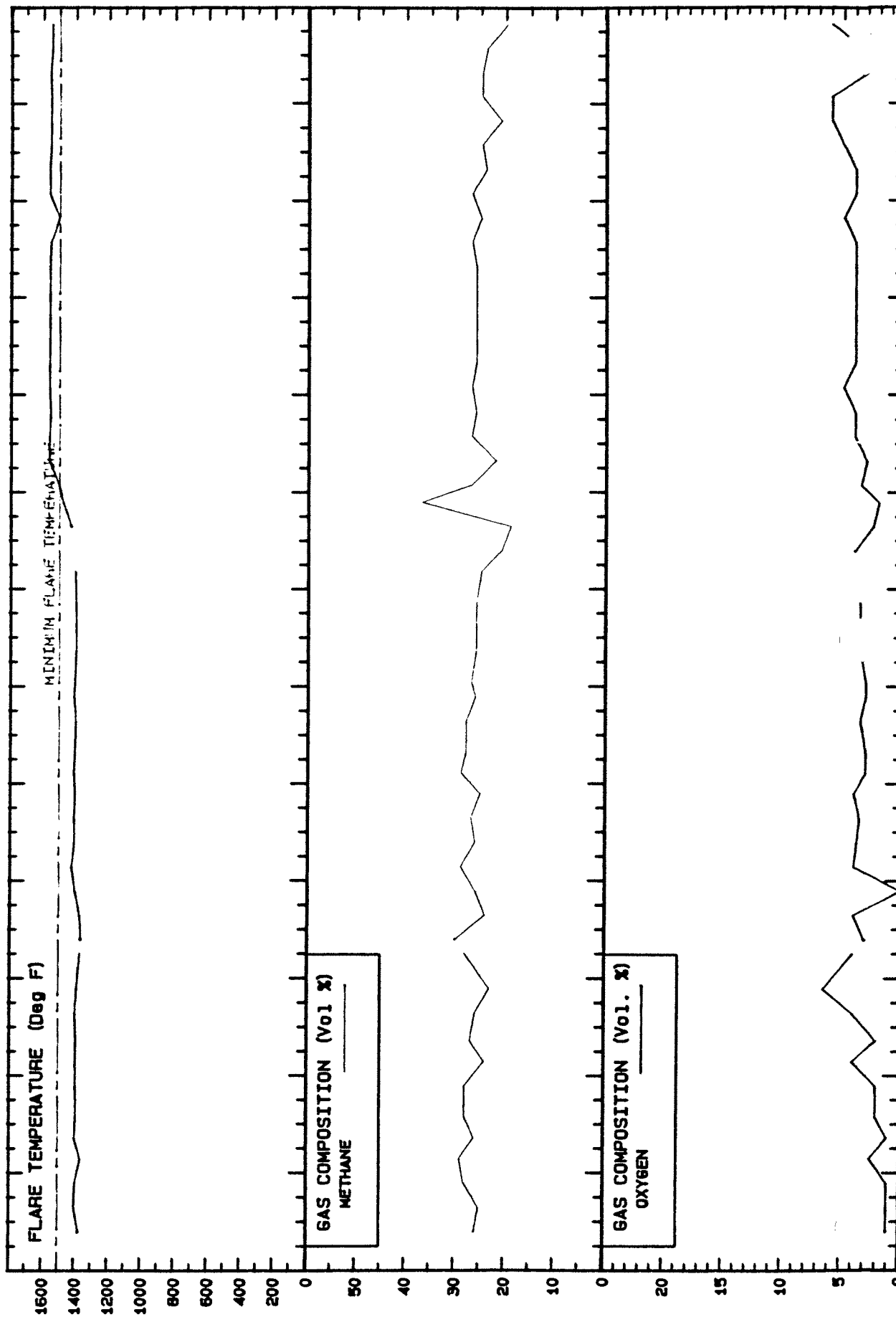
MONITORING DATE	5-2	5-9	5-16	5-23	5-30
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1552	1560	1549	1550
METHANE (Vol %)	21	25	25	24	20
OXYGEN (Vol %)	6.0	6.0	3.0	3.5	6.0
VACUUM (In. H2O)	-24	-22.5	-22	-24	-24
BACK PRESS. (In. H2O)	23.0	30.0	23.0	20.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
24	3	2	5	0	0
B3B	0	0.2	0	0	0
B6B	0	0	TRC	0	0
B6C	0	0	TRC	0	0
B7C	0	0	TRC	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JUNE 4, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6-JUN 90  
WEEKLY MONITORING PERIOD..... 2-MAY TO 30-MAY-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 5-30-90

### 1. FLARE STATION DATA

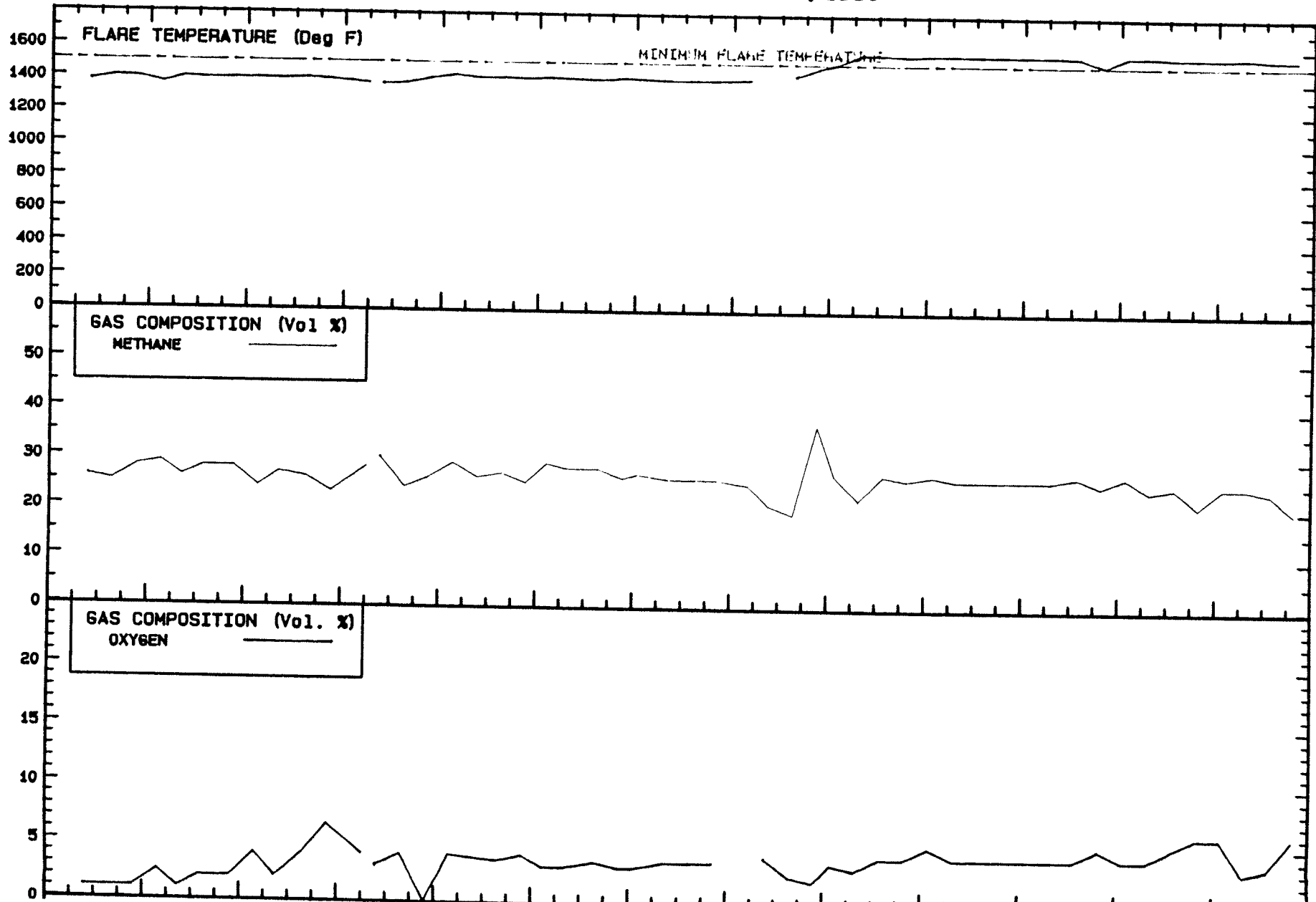
MONITORING DATE	5-2	5-9	5-16	5-23	5-30
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1552	1560	1549	1550
METHANE (Vol %)	21	25	25	24	20
OXYGEN (Vol %)	6.0	6.0	3.0	3.5	6.0
VACUUM (In. H2O)	-24	-22.5	-22	-24	-24
BACK PRESS. (In. H2O)	23.0	30.0	23.0	20.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
24	3	2	5	0	0
B3B	0	0.2	0	0	0
B6B	0	0	TRC	0	0
B6C	0	0	TRC	0	0
B7C	0	0	TRC	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JUNE 4, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6-JUN 90  
WEEKLY MONITORING PERIOD..... 2-MAY TO 30-MAY-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

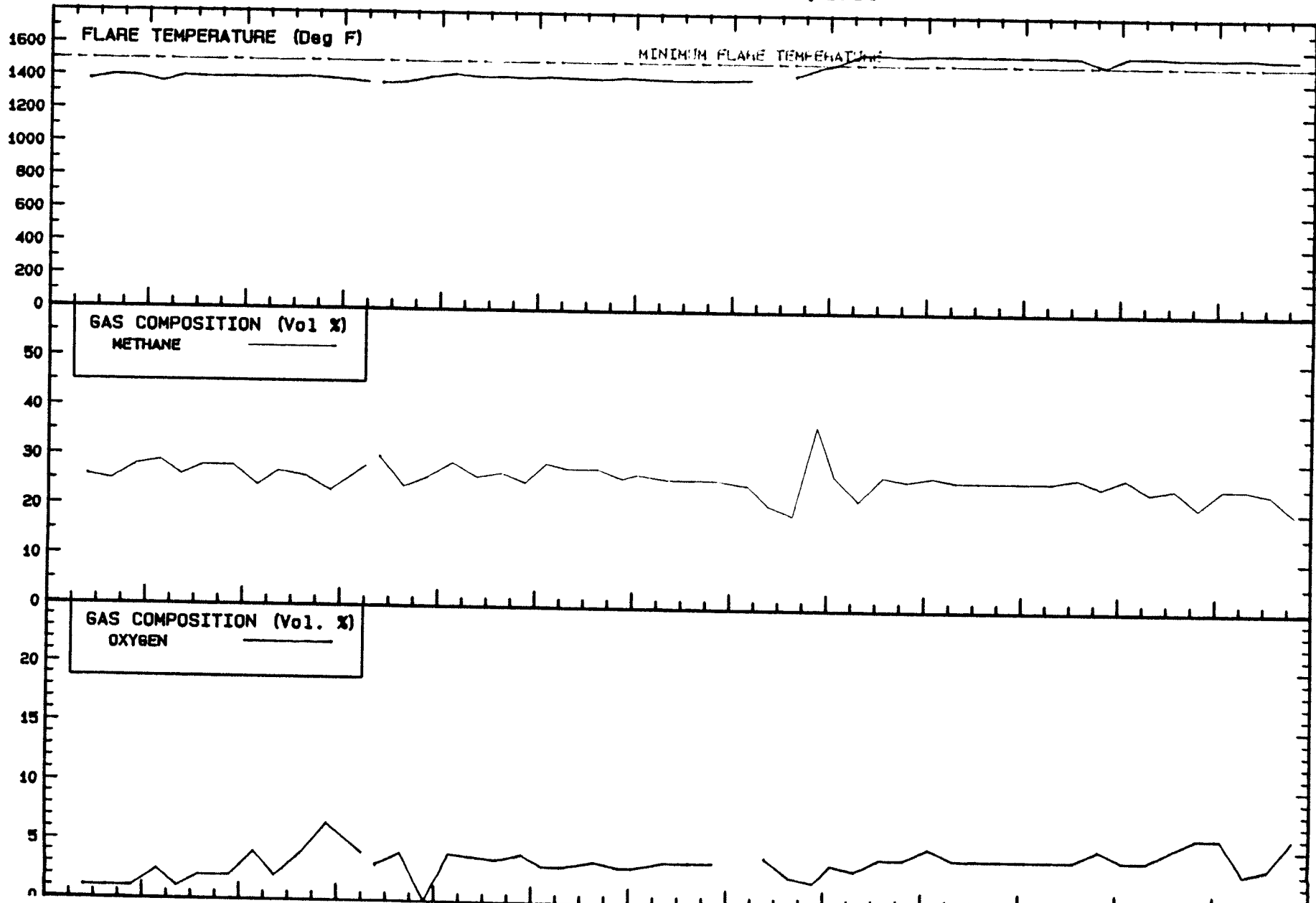
NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JUNE 4, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6-JUN 90  
WEEKLY MONITORING PERIOD..... 2-MAY TO 30-MAY-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 5-30-90

### 1. FLARE STATION DATA

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1552	1560	1549	1550
METHANE (Vol %)	21	25	25	24	20
OXYGEN (Vol %)	6.0	6.0	3.0	3.5	6.0
VACUUM (In. H2O)	-24	-22.5	-22	-24	-24
BACK PRESS. (In. H2O)	23.0	30.0	23.0	20.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
24	3	2	5	0	0
B3B	0	0.2	0	0	0
B6B	0	0	TRC	0	0
B6C	0	0	TRC	0	0
B7C	0	0	TRC	0	0

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	3	2	5	0	0

# EXHIBIT A (Continued)

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0.2	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	TRC	0	0
B6C	0	0	TRC	0	0

TRC = TRACE OF CH4

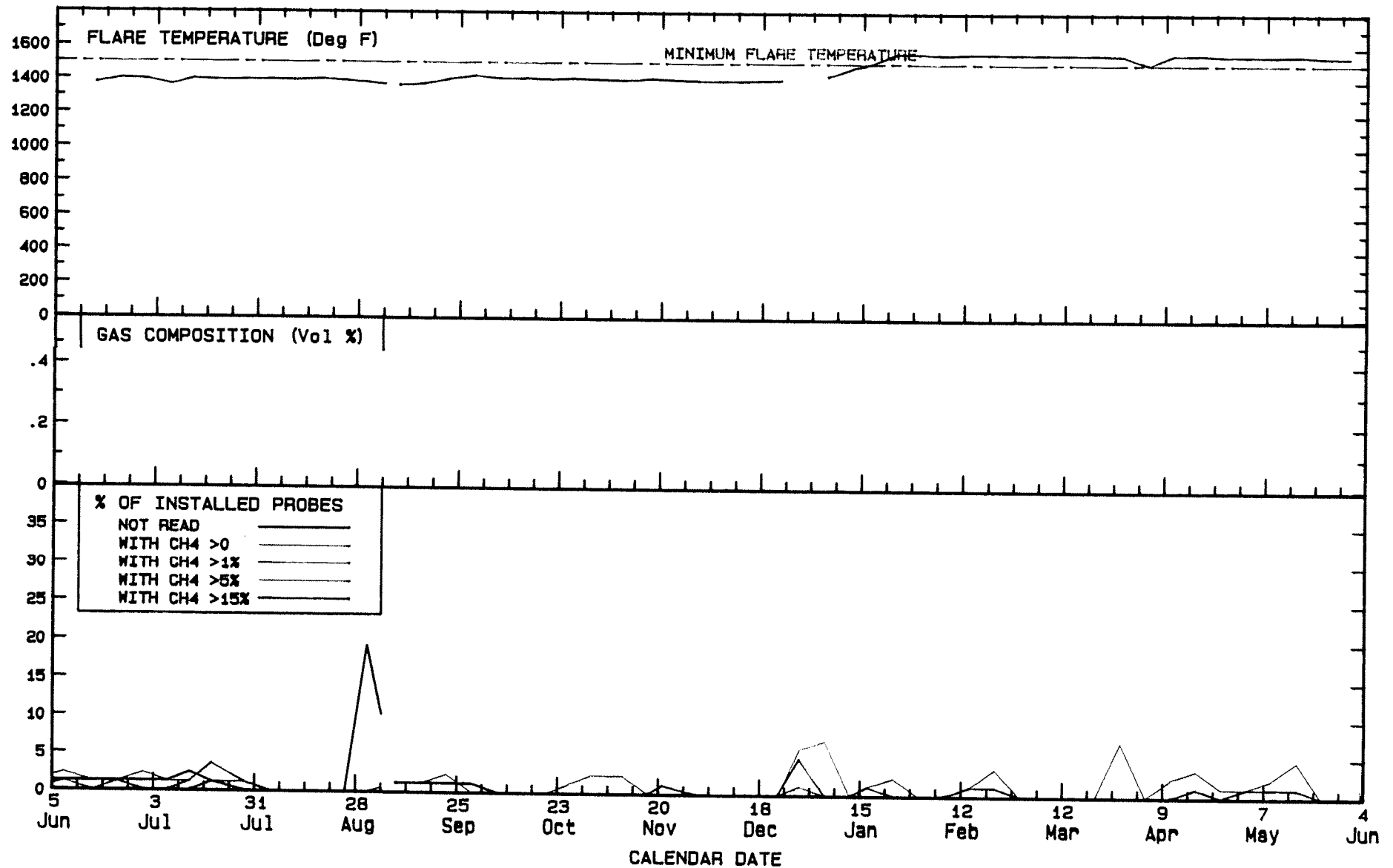
# EXHIBIT A (Continued)

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
B7B	0	0	0	0	0
B7C	0	0	TRC	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

TRC = TRACE OF CH4

Report Prepared By  
GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING JUNE 4, 1990**



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6-JUN 90  
WEEKLY MONITORING PERIOD..... 2-MAY TO 30-MAY-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 5-30-90

### 1. FLARE STATION DATA

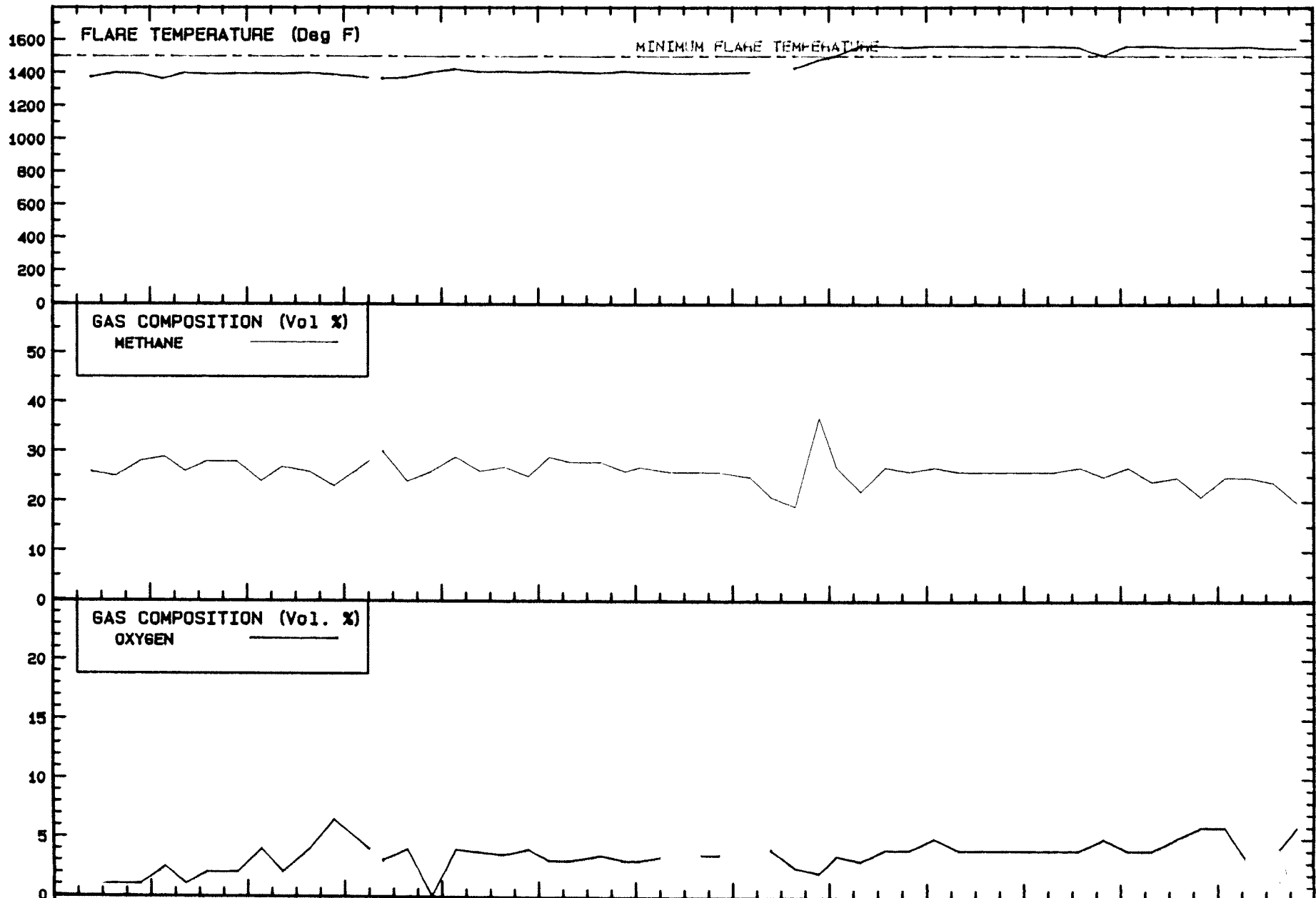
MONITORING DATE	5-2	5-9	5-16	5-23	5-30
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1555	1552	1560	1549	1550
METHANE (Vol %)	21	25	25	24	20
OXYGEN (Vol %)	6.0	6.0	3.0	3.5	6.0
VACUUM (In. H2O)	-24	-22.5	-22	-24	-24
BACK PRESS. (In. H2O)	23.0	30.0	23.0	20.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	5-2	5-9	5-16	5-23	5-30
PROBE	VOLUME % METHANE				
24	3	2	5	0	0
B3B	0	0.2	0	0	0
B6B	0	0	TRC	0	0
B6C	0	0	TRC	0	0
B7C	0	0	TRC	0	0

TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JUNE 4, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 4-JUL 90  
WEEKLY MONITORING PERIOD..... 6-JUN TO 27-JUN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	82
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE. ....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE ~~RE~~ OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 6-27-90

### 1. FLARE STATION DATA

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1552	1550	1546	1550
METHANE (Vol %)	20	25	27	26	26
OXYGEN (Vol %)	6.0	3.5	4.0	3.5	4.0
VACUUM (In. H2O)	-24	-24.5	-25	-24	-22
BACK PRESS. (In. H2O)	23.0	22.0	22.0	22.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

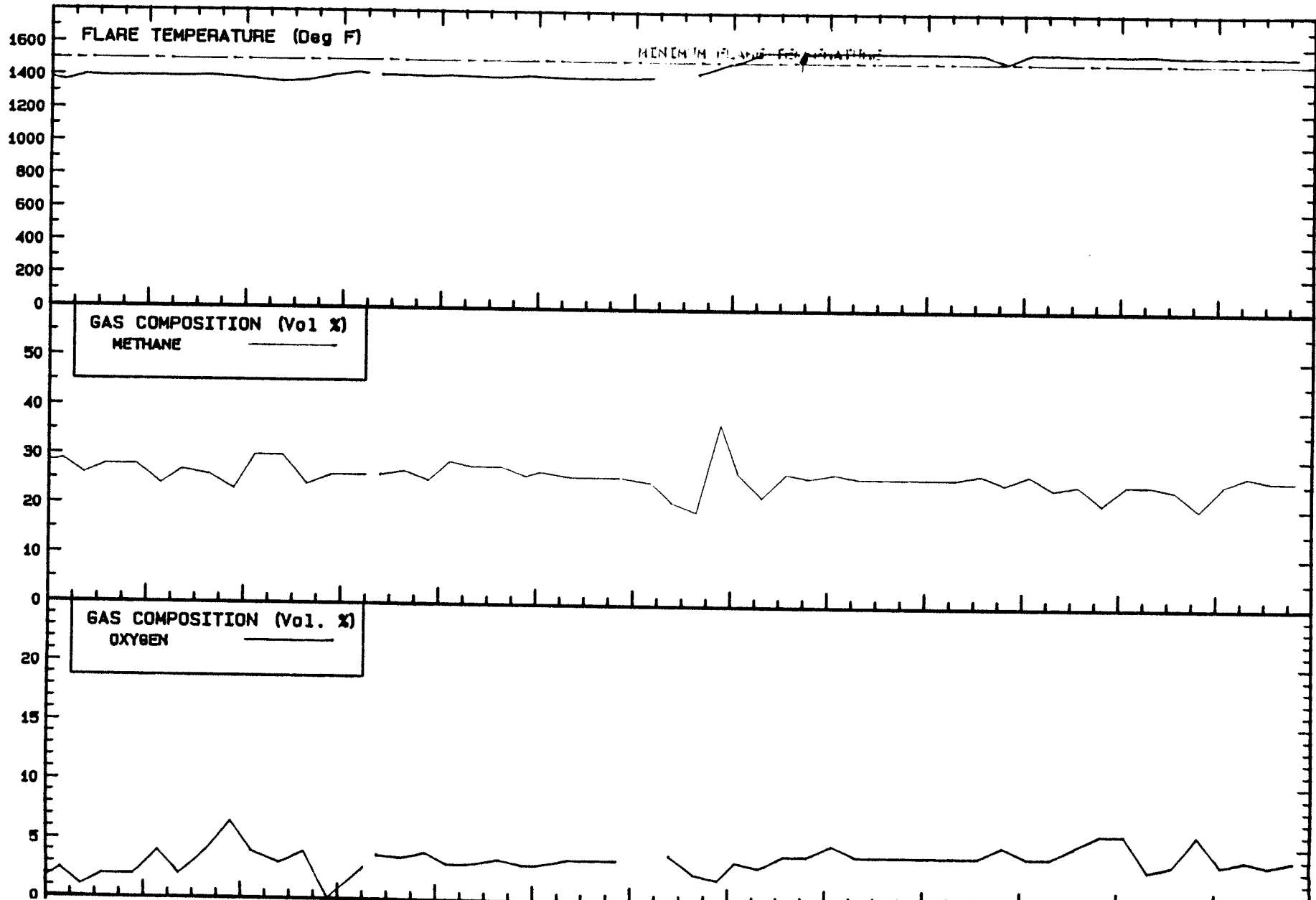
MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
16X	0	0	0	0	LST

LST = LOST

### 3. ALL PROBES

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 4-JUL 90  
WEEKLY MONITORING PERIOD..... 6-JUN TO 27-JUN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	82
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE. ....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 6-27-90

### 1. FLARE STATION DATA

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1552	1550	1546	1550
METHANE (Vol %)	20	25	27	26	26
OXYGEN (Vol %)	6.0	3.5	4.0	3.5	4.0
VACUUM (In. H2O)	-24	-24.5	-25	-24	-22
BACK PRESS. (In. H2O)	23.0	22.0	22.0	22.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

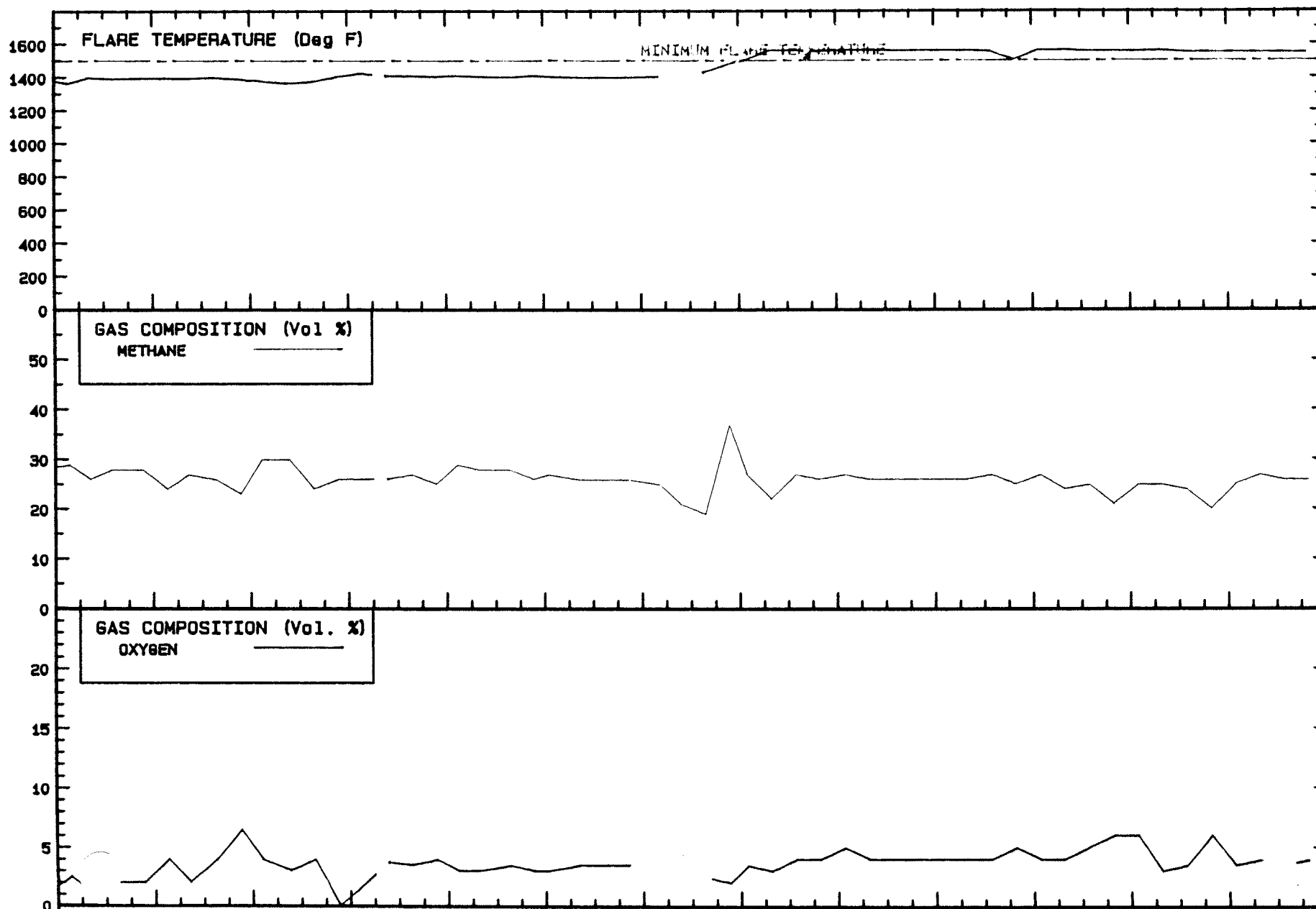
MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
16X	0	0	0	0	LST

LST = LOST

### 3. ALL PROBES

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 4-JUL 90  
WEEKLY MONITORING PERIOD..... 6-JUN TO 27-JUN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	82
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE. ....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE ~~OPERATING~~ OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 6-27-90

### 1. FLARE STATION DATA

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1552	1550	1546	1550
METHANE (Vol %)	20	25	27	26	26
OXYGEN (Vol %)	6.0	3.5	4.0	3.5	4.0
VACUUM (In. H2O)	-24	-24.5	-25	-24	-22
BACK PRESS. (In. H2O)	23.0	22.0	22.0	22.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

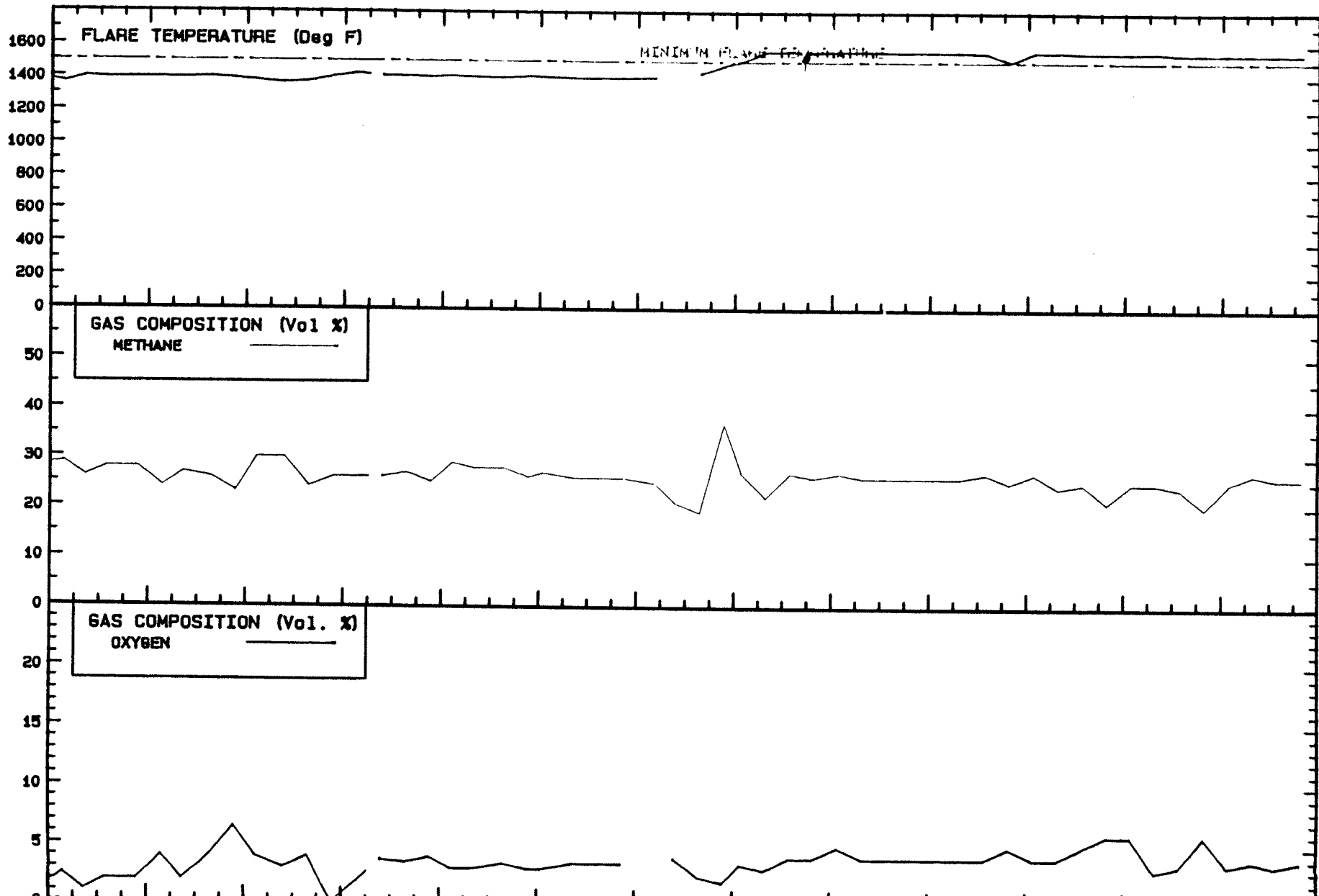
MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
16X	0	0	0	0	LST

LST = LOST

### 3. ALL PROBES

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 4-JUL 90  
WEEKLY MONITORING PERIOD..... 6-JUN TO 27-JUN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	82
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE ~~OPERATING~~ CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

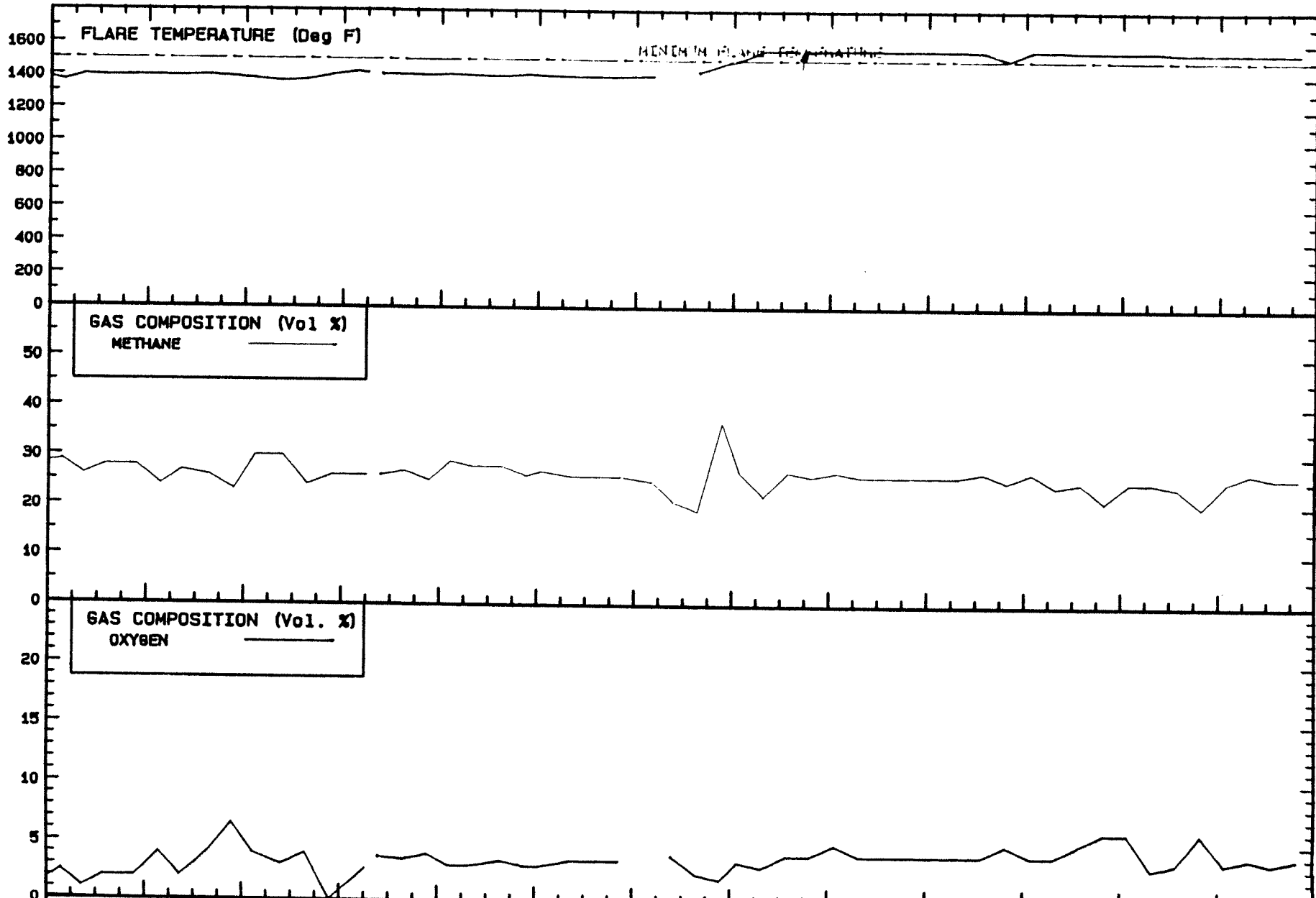
NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 2, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 4-JUL 90  
WEEKLY MONITORING PERIOD..... 6-JUN TO 27-JUN-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	82
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 6-27-90

### 1. FLARE STATION DATA

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1552	1550	1546	1550
METHANE (Vol %)	20	25	27	26	26
OXYGEN (Vol %)	6.0	3.5	4.0	3.5	4.0
VACUUM (In. H2O)	-24	-24.5	-25	-24	-22
BACK PRESS. (In. H2O)	23.0	22.0	22.0	22.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
16X	0	0	0	0	LST

LST = LOST

### 3. ALL PROBES

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0

# EXHIBIT A (Continued)

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	LST
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0

LST = LOST

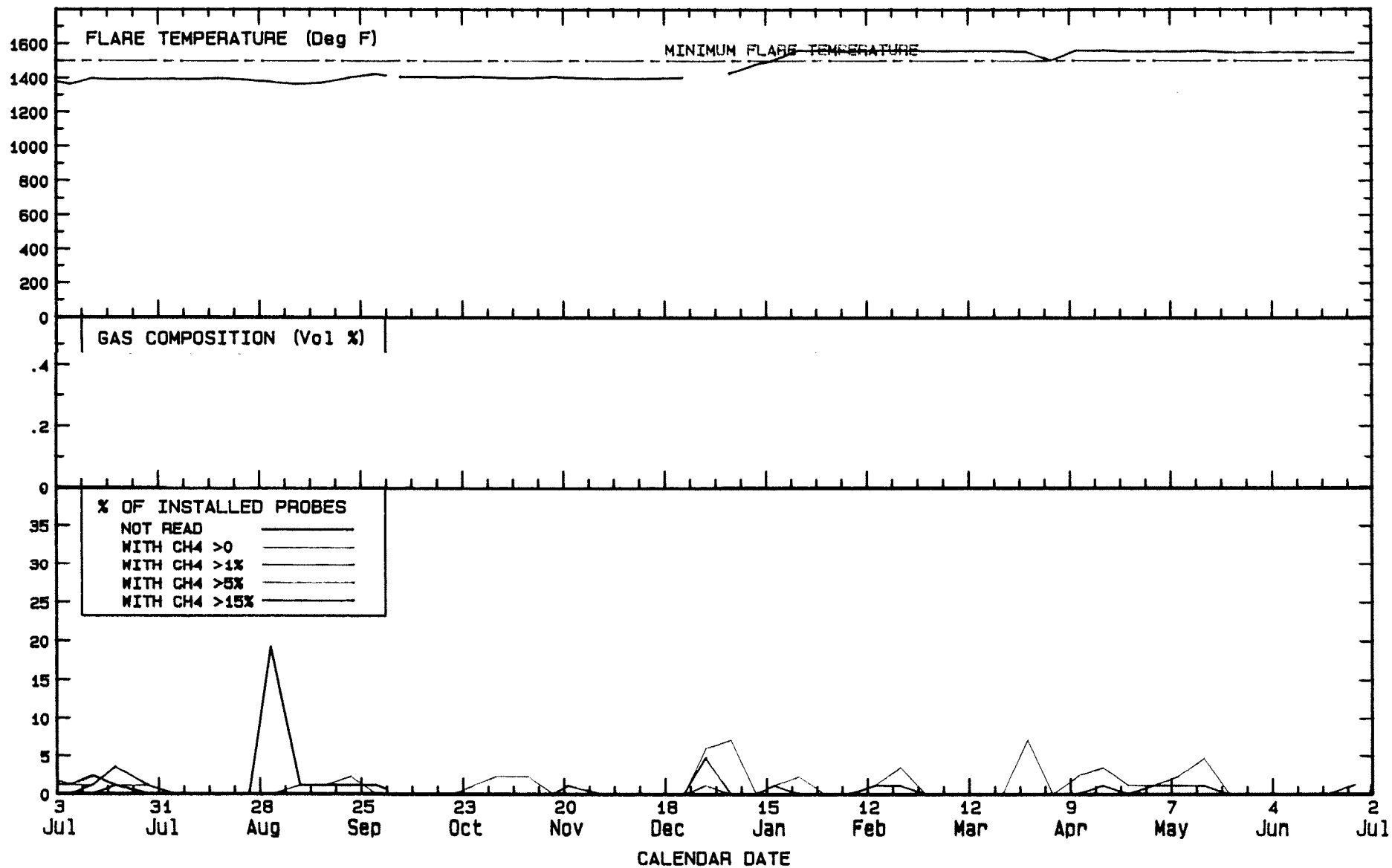
# EXHIBIT A (Continued)

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING JULY 2, 1990**



# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 6-27-90

### 1. FLARE STATION DATA

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1552	1550	1546	1550
METHANE (Vol %)	20	25	27	26	26
OXYGEN (Vol %)	6.0	3.5	4.0	3.5	4.0
VACUUM (In. H2O)	-24	-24.5	-25	-24	-22
BACK PRESS. (In. H2O)	23.0	22.0	22.0	22.0	23.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

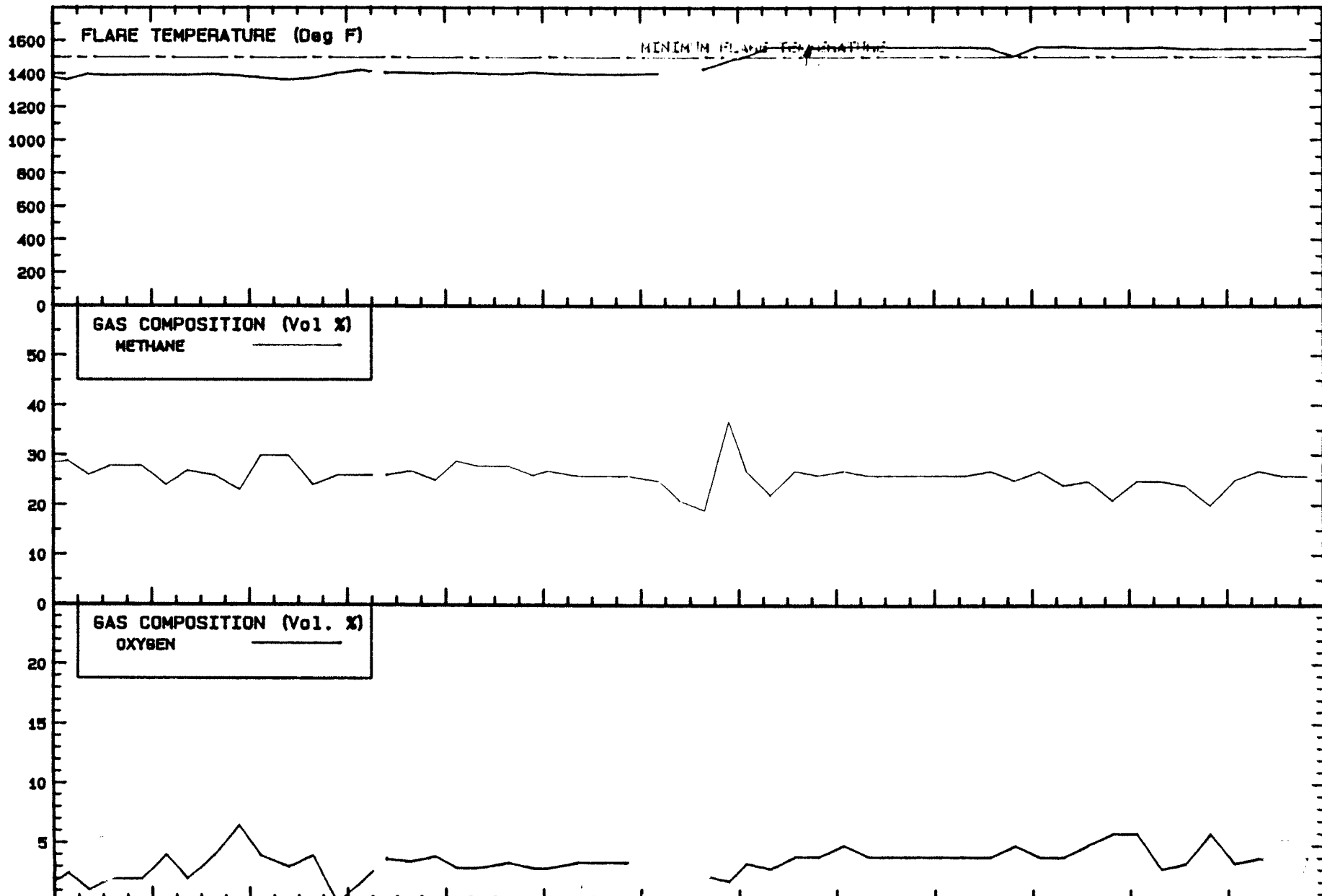
MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
16X	0	0	0	0	LST

LST = LOST

### 3. ALL PROBES

MONITORING DATE	5-30	6-6	6-13	6-20	6-27
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 2, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-JUL 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	80
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	3
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

29B, 31A, B1B: TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 7-25-90

### 1. FLARE STATION DATA

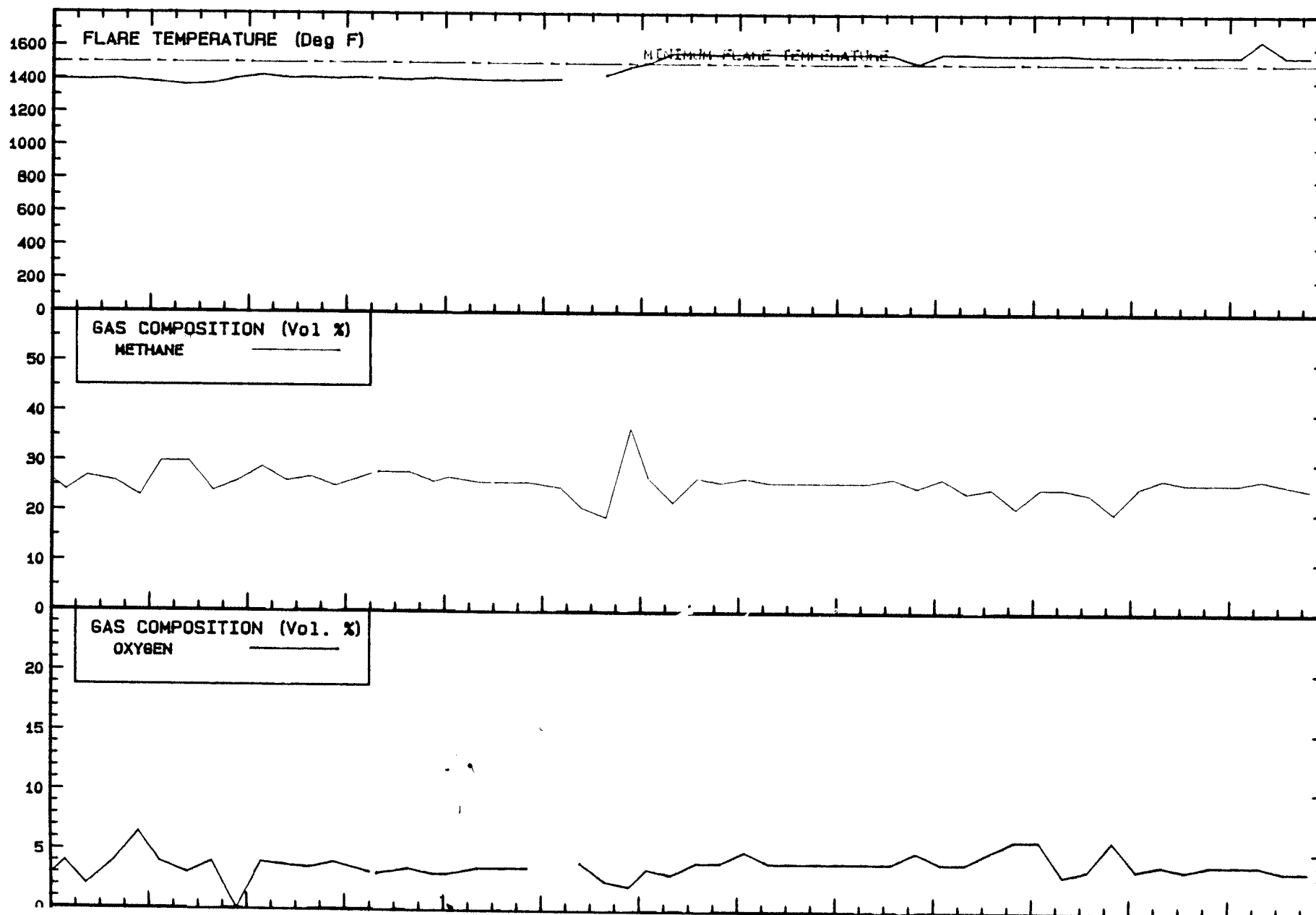
MONITORING DATE	6-27	7-5	7-11	7-18	7-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1650	1550	1552
METHANE (Vol %)	26	26	27	26	25
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-22	-22	-22	-20	-21
BACK PRESS. (In. H2O)	23.0	23.0	22.0	23.0	24.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
11B	0	0	0	1.7	0
16X	LST	LST	LST	0	0
29B	0	0	0	0	TRC
31A	0	0	0	0	TRC
B1B	0	0	0	7	TRC

LST = LOST; TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-JUL 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	80
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	3
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

29B, 31A, B1B: TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 7-25-90

### 1. FLARE STATION DATA

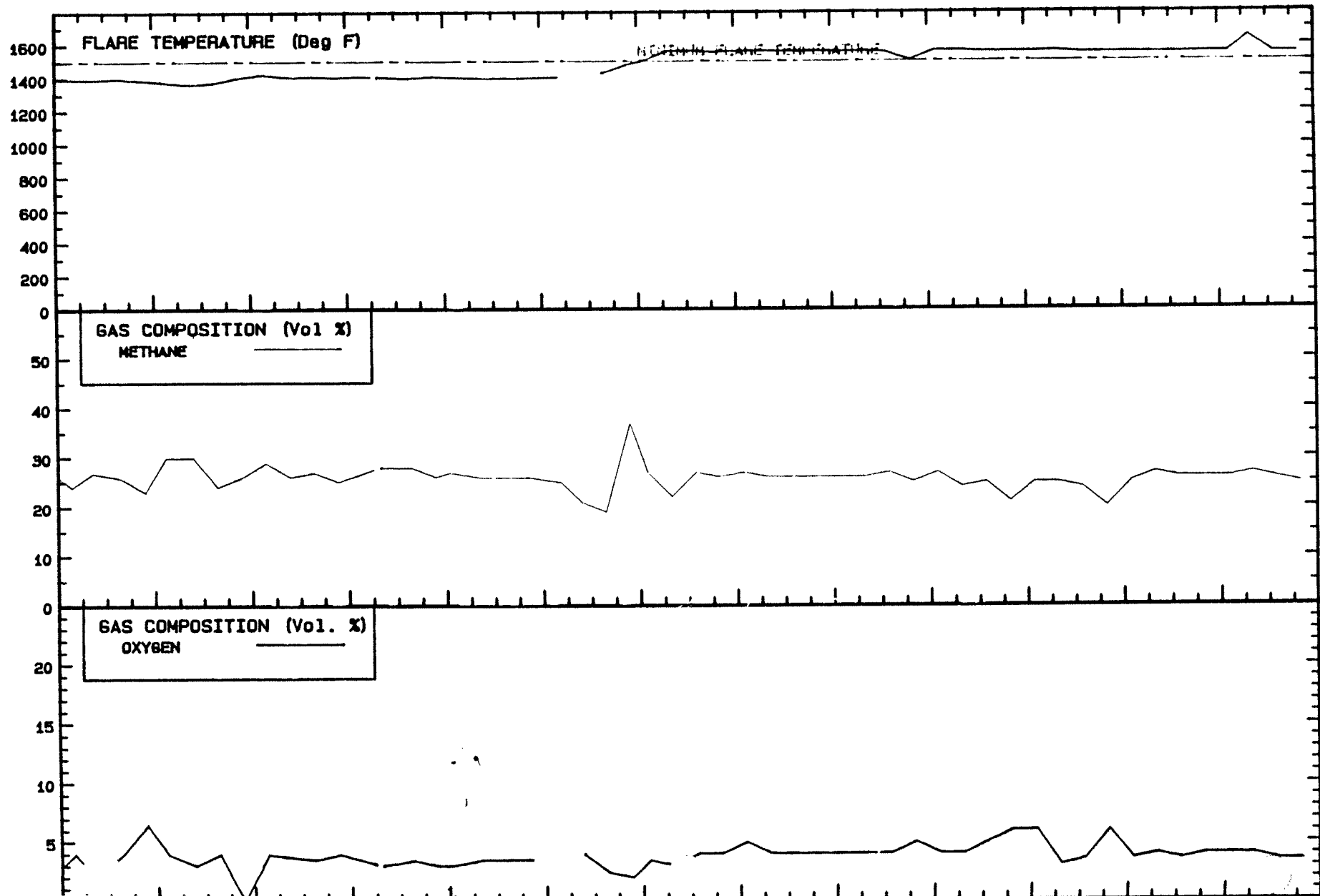
MONITORING DATE	6-27	7-5	7-11	7-18	7-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1650	1550	1552
METHANE (Vol %)	26	26	27	26	25
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-22	-22	-22	-20	-21
BACK PRESS. (In. H2O)	23.0	23.0	22.0	23.0	24.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
11B	0	0	0	1.7	0
16X	LST	LST	LST	0	0
29B	0	0	0	0	TRC
31A	0	0	0	0	TRC
B1B	0	0	0	7	TRC

LST = LOST; TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-JUL 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	80
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	3
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

29B, 31A, B1B: TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 7-25-90

### 1. FLARE STATION DATA

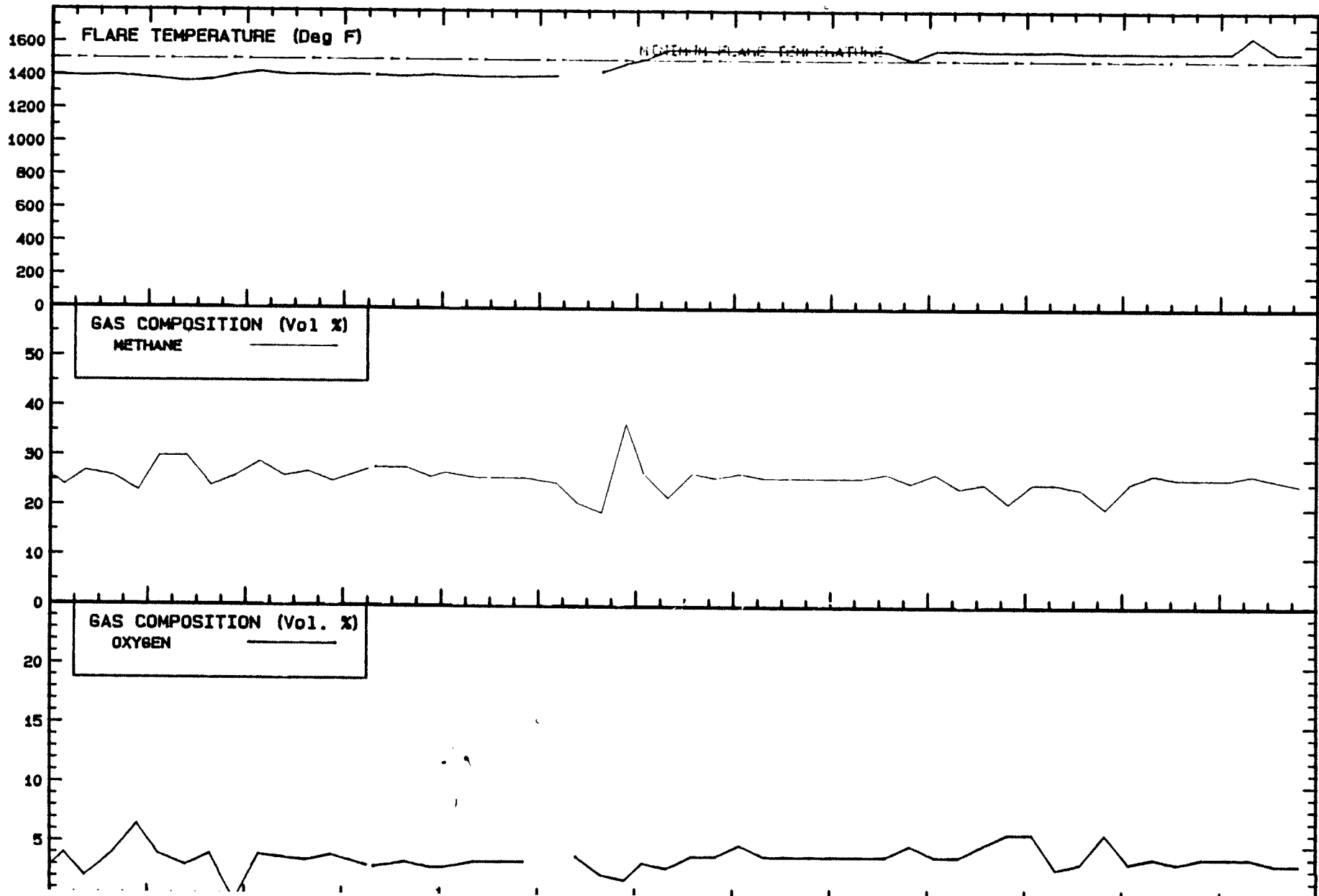
MONITORING DATE	6-27	7-5	7-11	7-18	7-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1650	1550	1552
METHANE (Vol %)	26	26	27	26	25
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-22	-22	-22	-20	-21
BACK PRESS. (In. H2O)	23.0	23.0	22.0	23.0	24.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
11B	0	0	0	1.7	0
16X	LST	LST	LST	0	0
29B	0	0	0	0	TRC
31A	0	0	0	0	TRC
B1B	0	0	0	7	TRC

LST = LOST; TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-JUL 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	80
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	3
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

29B, 31A, B1B: TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 7-25-90

### 1. FLARE STATION DATA

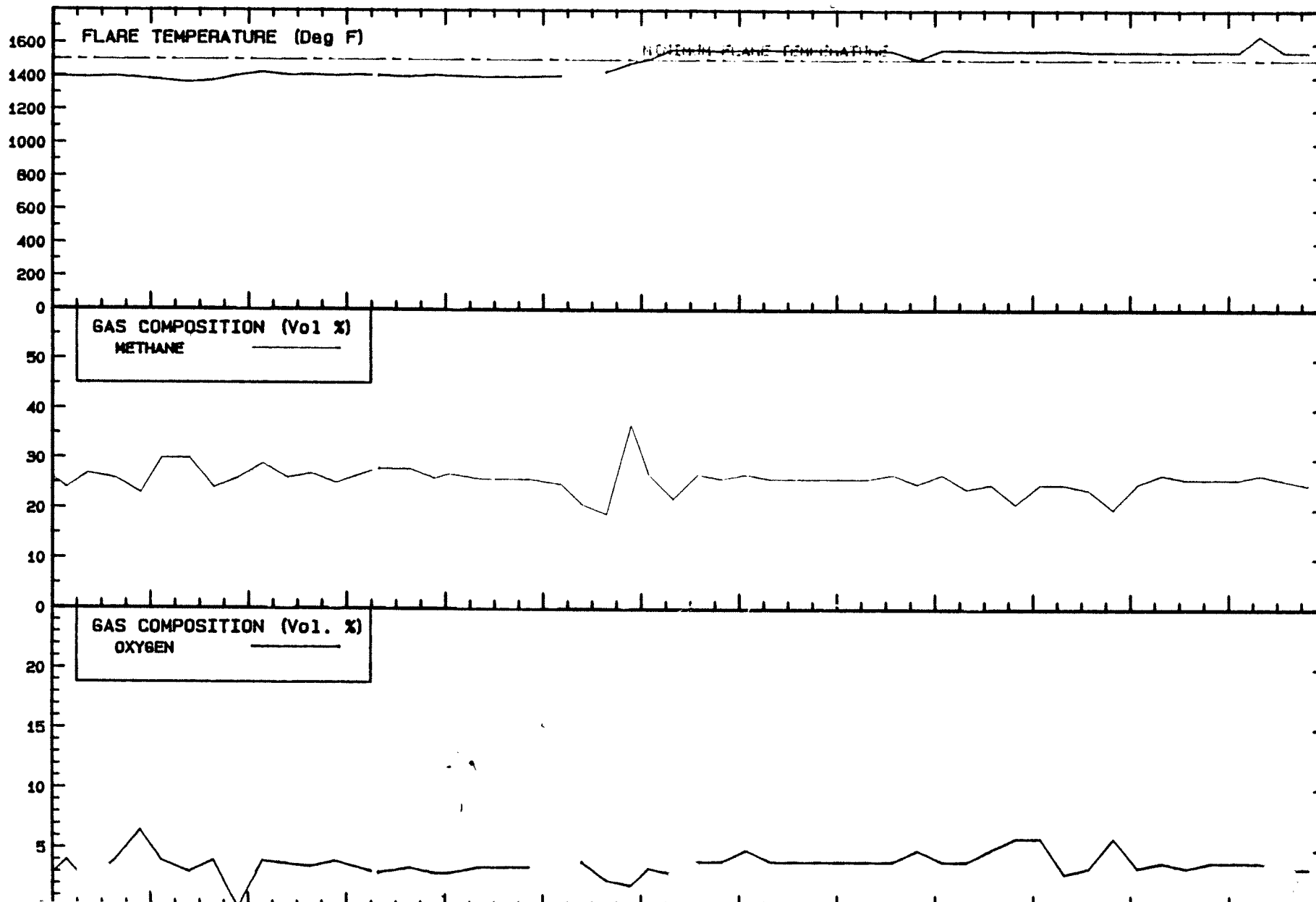
MONITORING DATE	6-27	7-5	7-11	7-18	7-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1650	1550	1552
METHANE (Vol %)	26	26	27	26	25
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-22	-22	-22	-20	-21
BACK PRESS. (In. H2O)	23.0	23.0	22.0	23.0	24.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
11B	0	0	0	1.7	0
16X	LST	LST	LST	0	0
29B	0	0	0	0	TRC
31A	0	0	0	0	TRC
B1B	0	0	0	7	TRC

LST = LOST; TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-JUL 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	80
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	3
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

29B, 31A, B1B: TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 7-25-90

### 1. FLARE STATION DATA

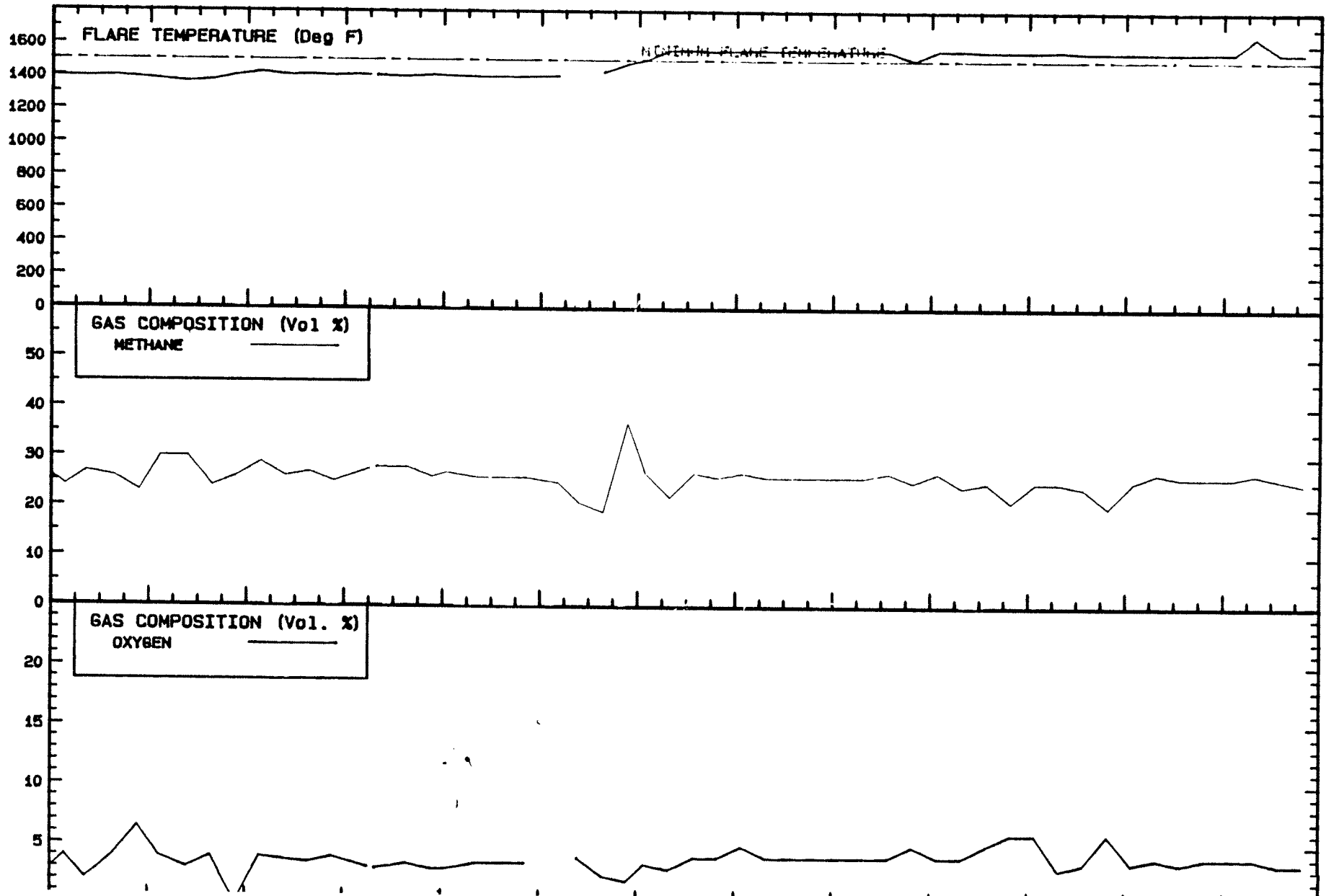
MONITORING DATE	6-27	7-5	7-11	7-18	7-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1650	1550	1552
METHANE (Vol %)	26	26	27	26	25
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-22	-22	-22	-20	-21
BACK PRESS. (In. H2O)	23.0	23.0	22.0	23.0	24.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
11B	0	0	0	1.7	0
16X	LST	LST	LST	0	0
29B	0	0	0	0	TRC
31A	0	0	0	0	TRC
81B	0	0	0	7	TRC

LST = LOST; TRC = TRACE OF CH4

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 30, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-AUG 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 8-29-90

### 1. FLARE STATION DATA

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1554	1553	1552	1550
METHANE (Vol %)	25	23	26	24	26
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-21	-21	-22	-22	-21
BACK PRESS. (In. H2O)	25.0	25.0	26.0	24.5	25.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

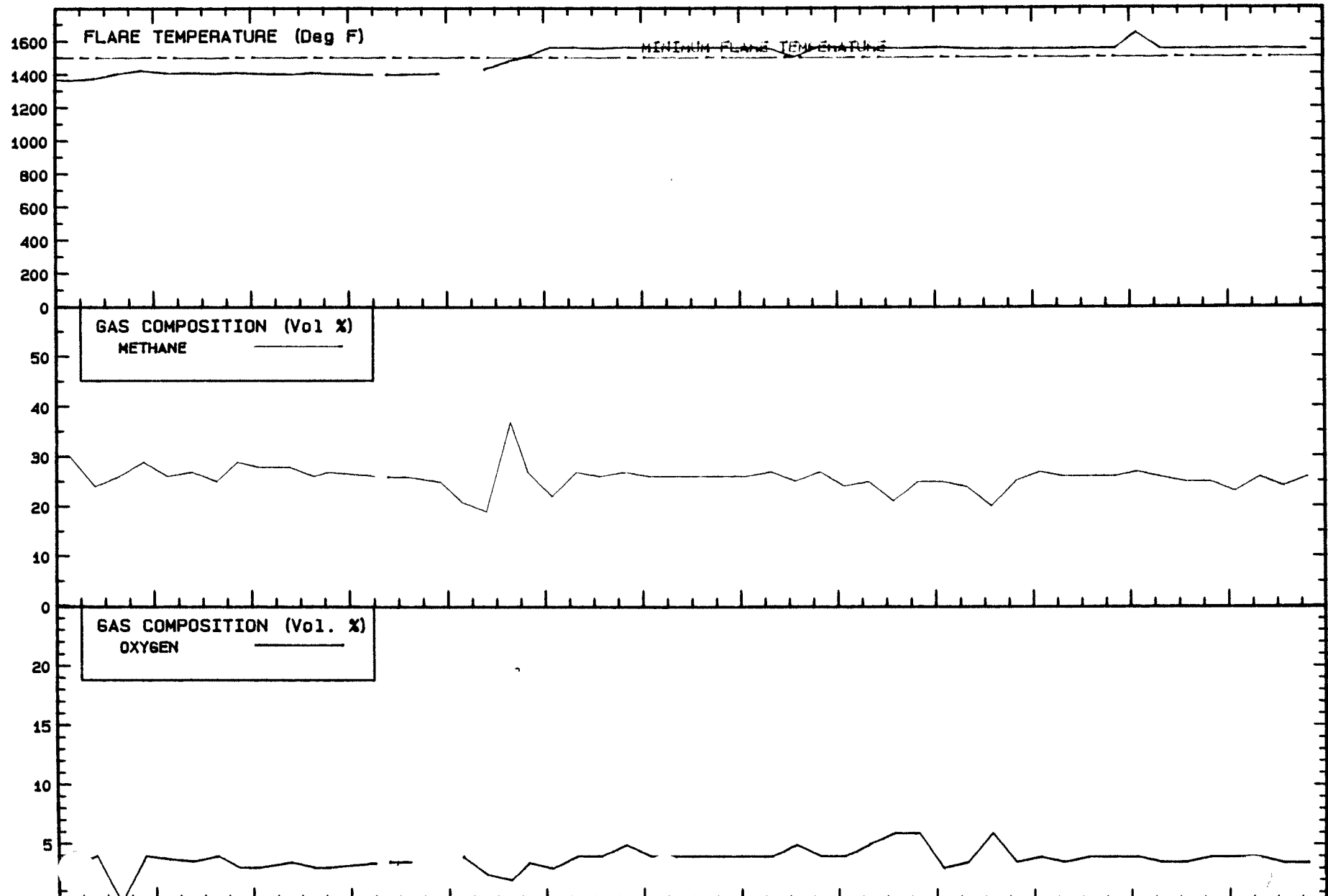
MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
16A	TRC	0	0	0	0
B1B	TRC	0	0	0	0

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING SEPTEMBER 3, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-AUG 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 8-29-90

### 1. FLARE STATION DATA

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
START TIME	—	—	—	—	—
TEMPERATURE (Deg F)	1550	1554	1553	1552	1550
METHANE (Vol %)	25	23	26	24	26
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-21	-21	-22	-22	-21
BACK PRESS. (In. H2O)	25.0	25.0	26.0	24.5	25.0
GAS FLOW (In. H2O)	—	—	—	—	—

### 2. PROBLEM PROBES

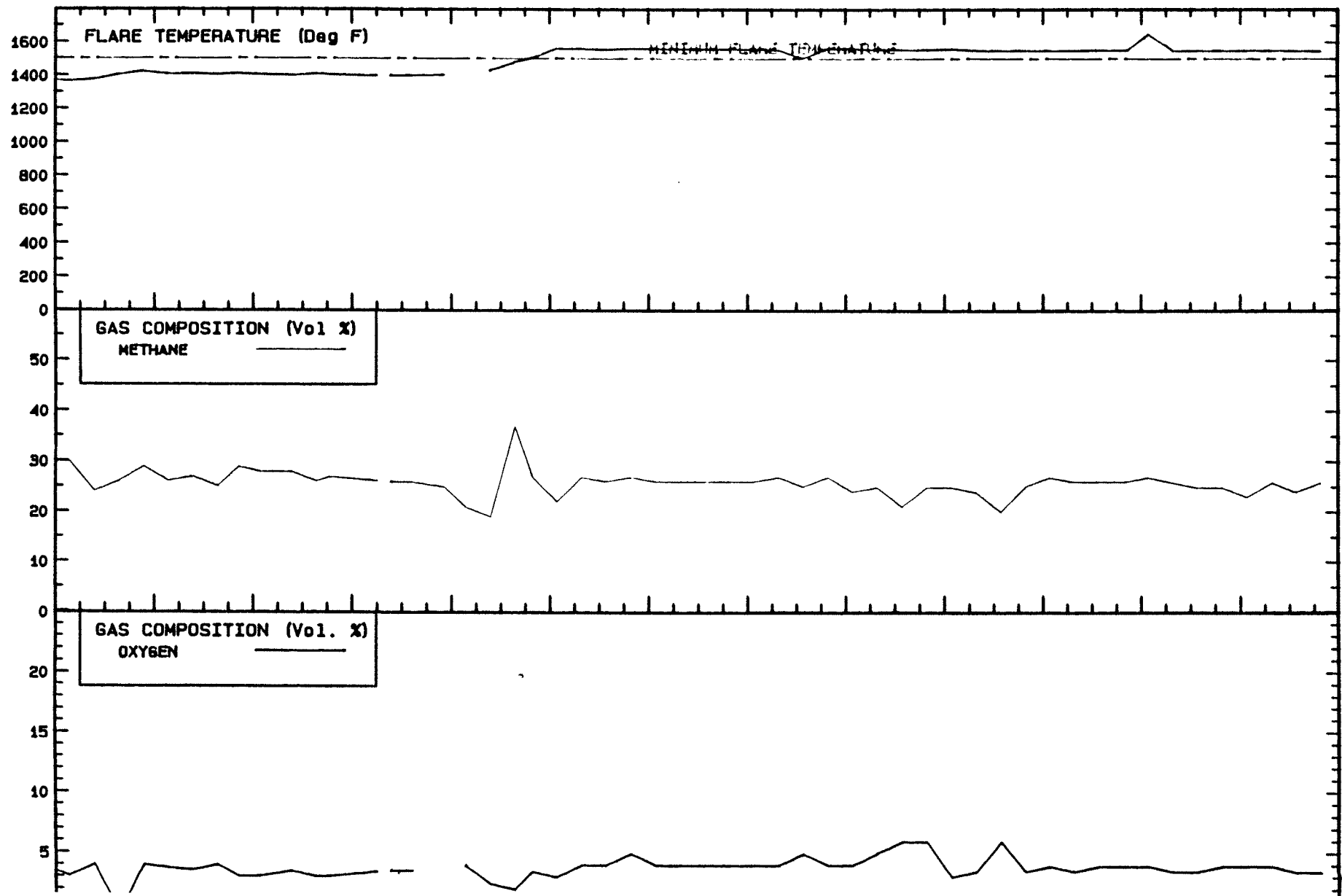
MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
16A	TRC	0	0	0	0
B1B	TRC	0	0	0	0

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING SEPTEMBER 3, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-AUG 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 8-29-90

### 1. FLARE STATION DATA

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1554	1553	1552	1550
METHANE (Vol %)	25	23	26	24	26
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-21	-21	-22	-22	-21
BACK PRESS. (In. H2O)	25.0	25.0	26.0	24.5	25.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

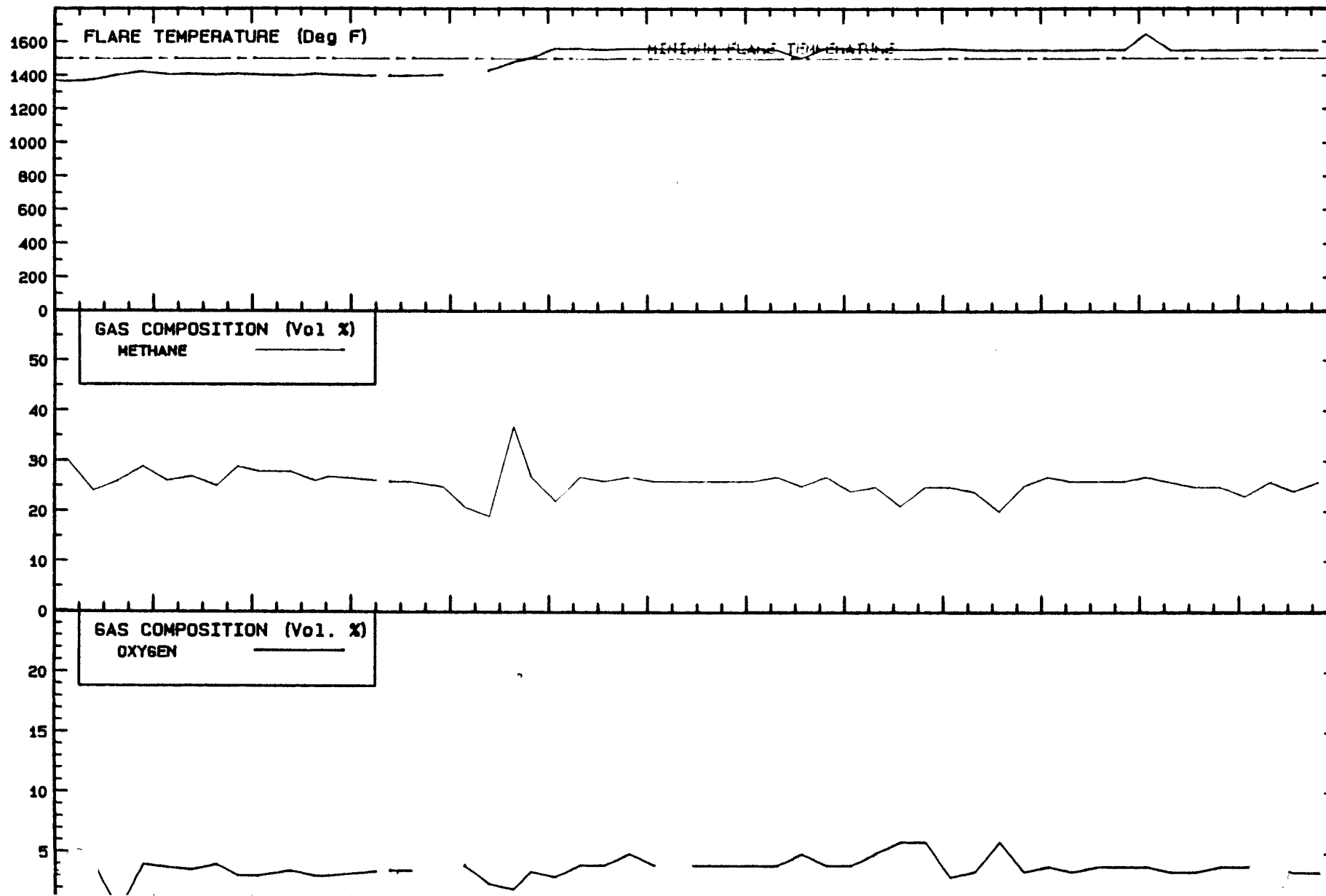
MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
16A	TRC	0	0	0	0
B1B	TRC	0	0	0	0

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING SEPTEMBER 3, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-JUL 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	80
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	3
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

29B, 31A, B1B: TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 7-25-90

### 1. FLARE STATION DATA

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1650	1550	1552
METHANE (Vol %)	26	26	27	26	25
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-22	-22	-22	-20	-21
BACK PRESS. (In. H2O)	23.0	23.0	22.0	23.0	24.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
11B	0	0	0	1.7	0
16X	LST	LST	LST	0	0
29B	0	0	0	0	TRC
31A	0	0	0	0	TRC
B1B	0	0	0	7	TRC

LST = LOST; TRC = TRACE OF CH4

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	1.7	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	LST	LST	LST	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0

LST = LOST

# EXHIBIT A (Continued)

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	TRC
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	TRC
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	7	TRC
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0

TRC = TRACE OF CH4

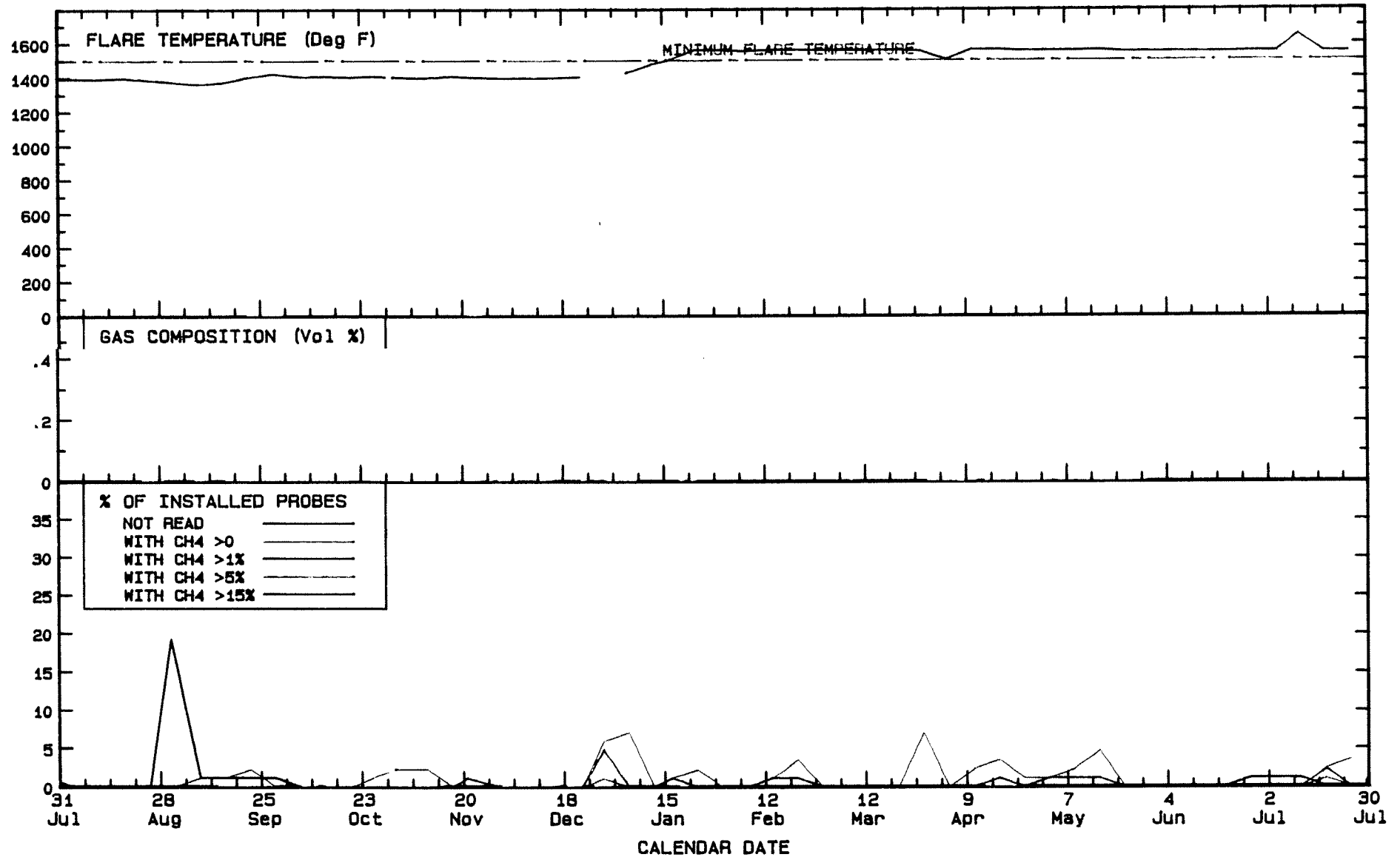
EXHIBIT A (Continued)

MONITORING DATE	6-27	7-5	7-11	7-18	7-25
PROBE	VOLUME % METHANE				
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESFRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING JULY 30, 1990**



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-AUG 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 8-29-90

### 1. FLARE STATION DATA

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1554	1553	1552	1550
METHANE (Vol %)	25	23	26	24	26
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-21	-21	-22	-22	-21
BACK PRESS. (In. H2O)	25.0	25.0	26.0	24.5	25.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
16A	TRC	0	0	0	0
B1B	TRC	0	0	0	0

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0

# EXHIBIT A (Continued)

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	TRC	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

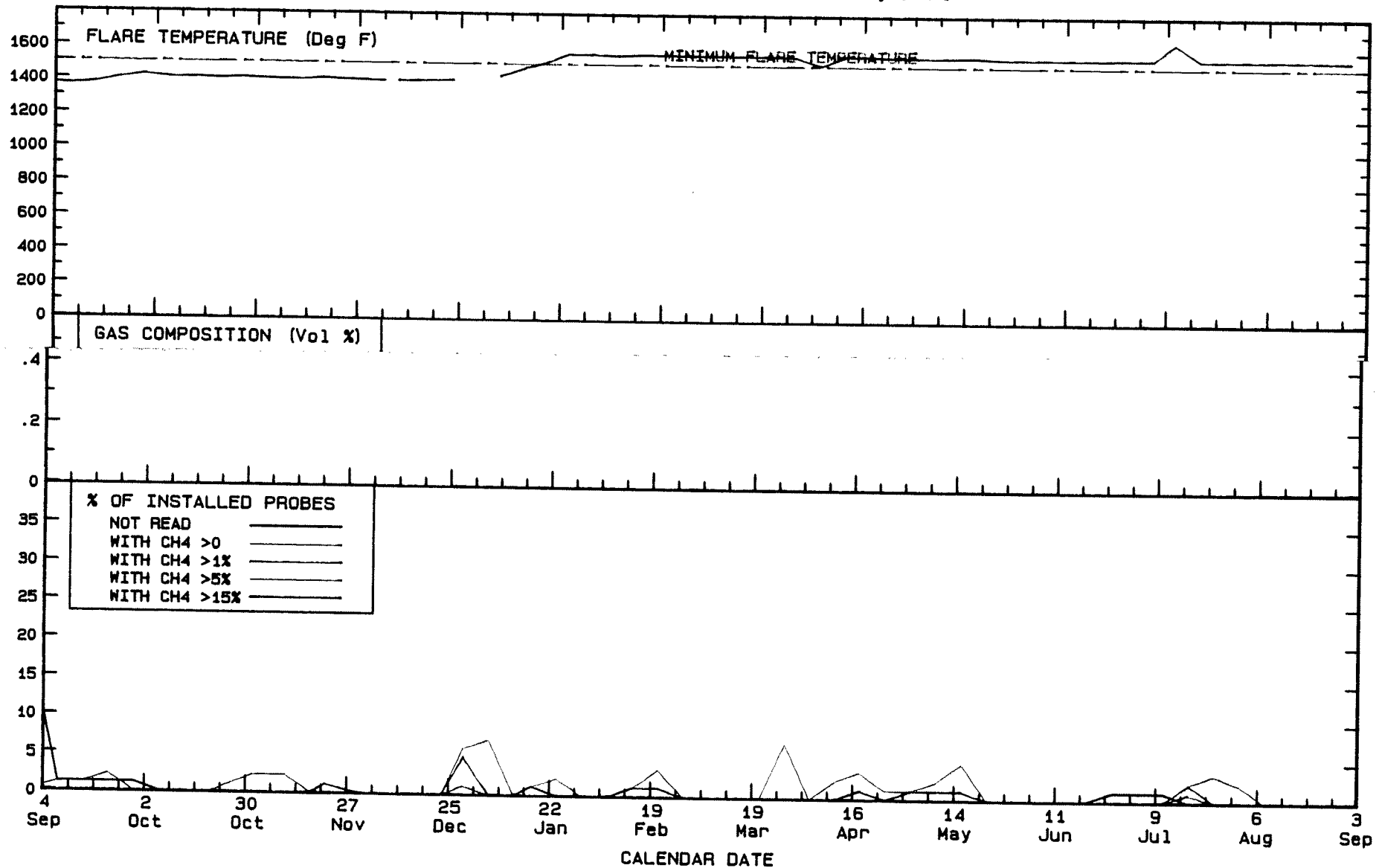
MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	TRC	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

TRC = TRACE OF CH4

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING SEPTEMBER 3, 1990**



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-AUG 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 8-29-90

#### 1. FLARE STATION DATA

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1554	1553	1552	1550
METHANE (Vol %)	25	23	26	24	26
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-21	-21	-22	-22	-21
BACK PRESS. (In. H2O)	25.0	25.0	26.0	24.5	25.0
GAS FLOW (In. H2O)	--	--	--	--	--

#### 2. PROBLEM PROBES

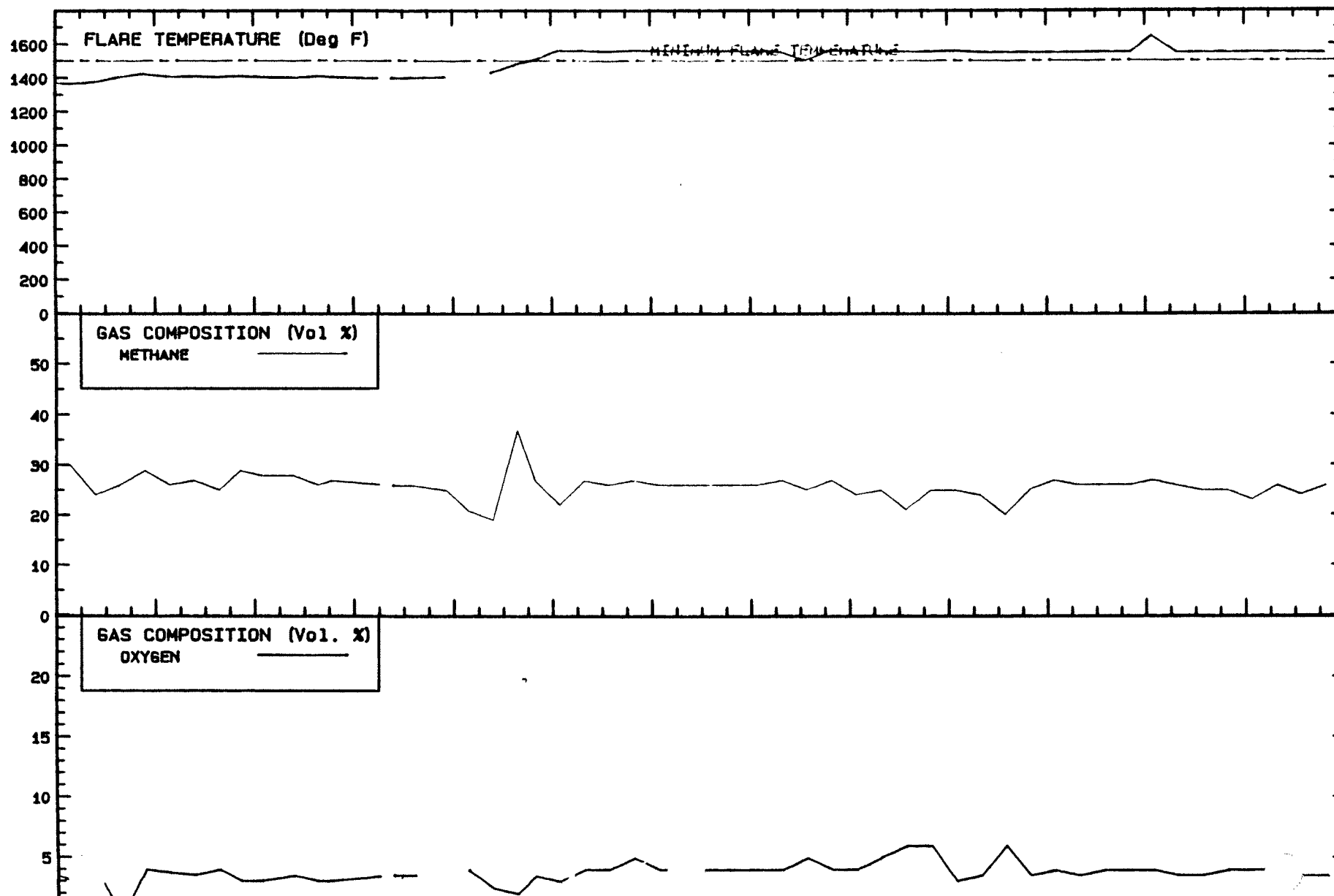
MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
16A	TRC	0	0	0	0
B1B	TRC	0	0	0	0

TRC = TRACE OF CH4

#### 3. ALL PROBES

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING SEPTEMBER 3, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 31-AUG 90  
WEEKLY MONITORING PERIOD..... 7-JUL TO 25-JUL-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 8-29-90

### 1. FLARE STATION DATA

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1554	1553	1552	1550
METHANE (Vol %)	25	23	26	24	26
OXYGEN (Vol %)	4.0	4.0	4.0	3.5	3.5
VACUUM (In. H2O)	-21	-21	-22	-22	-21
BACK PRESS. (In. H2O)	25.0	25.0	26.0	24.5	25.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

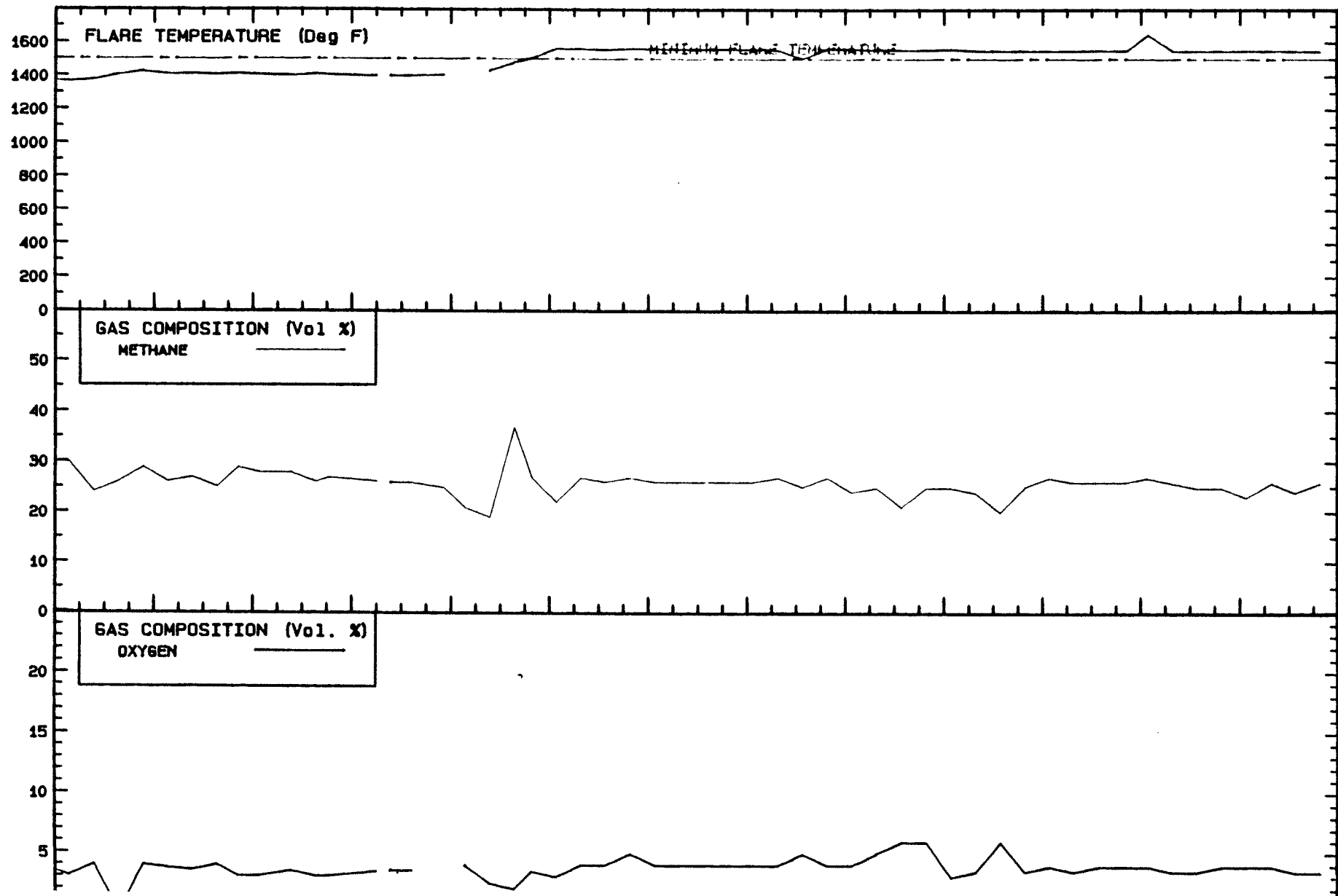
MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
16A	TRC	0	0	0	0
B1B	TRC	0	0	0	0

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	8-1	8-8	8-15	8-22	8-29
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING SEPTEMBER 3, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 29 SEP 90  
WEEKLY MONITORING PERIOD..... 5-SEP TO 26-SEP-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# 11B 1.5% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 9-26-90

### 1. FLARE STATION DATA

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1550	1550	1552
METHANE (Vol %)	26	25	25	25	25
OXYGEN (Vol %)	3.5	3.5	3.5	3.5	5.0
VACUUM (In. H2O)	-21	-21	-20	-20	-21
BACK PRESS. (In. H2O)	25.0	25.0	25.0	25.0	26.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

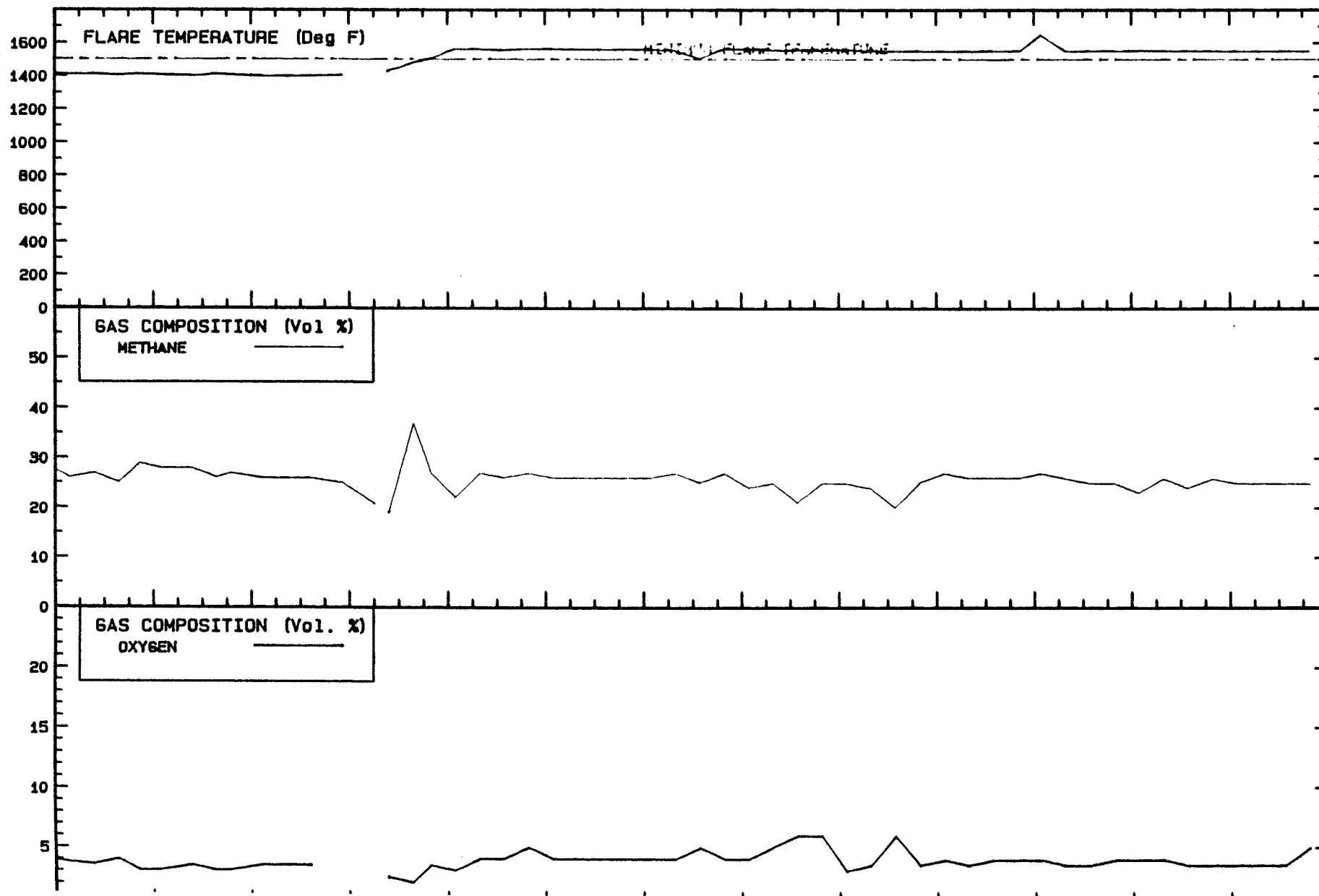
MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
11B	0	0	0	3	1.5
18B	0	TRC	0	0	0
22A	0	0	0	NRD	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

### 3. ALL PROBES

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING OCTOBER 1, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 29 SEP 90  
WEEKLY MONITORING PERIOD..... 5-SEP TO 26-SEP-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# 11B 1.5% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 9-26-90

### 1. FLARE STATION DATA

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1550	1550	1552
METHANE (Vol %)	26	25	25	25	25
OXYGEN (Vol %)	3.5	3.5	3.5	3.5	5.0
VACUUM (In. H2O)	-21	-21	-20	-20	-21
BACK PRESS. (In. H2O)	25.0	25.0	25.0	25.0	26.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

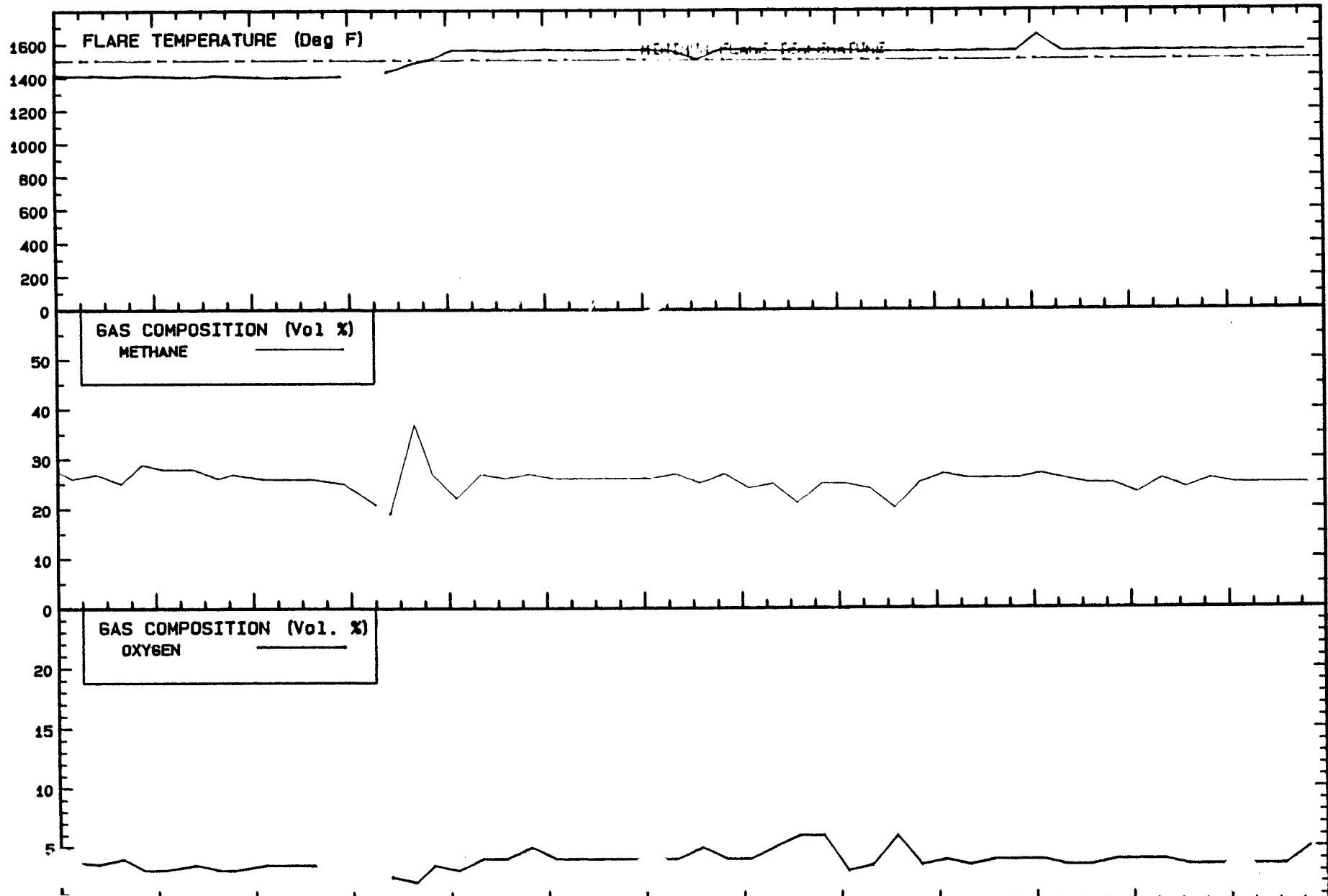
MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
11B	0	0	0	3	1.5
18B	0	TRC	0	0	0
22A	0	0	0	NRD	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

### 3. ALL PROBES

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING OCTOBER 1, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 29 SEP 90  
WEEKLY MONITORING PERIOD..... 5-SEP TO 26-SEP-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# 11B 1.5% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 9-26-90

### 1. FLARE STATION DATA

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1550	1550	1552
METHANE (Vol %)	26	25	25	25	25
OXYGEN (Vol %)	3.5	3.5	3.5	3.5	5.0
VACUUM (In. H2O)	-21	-21	-20	-20	-21
BACK PRESS. (In. H2O)	25.0	25.0	25.0	25.0	26.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

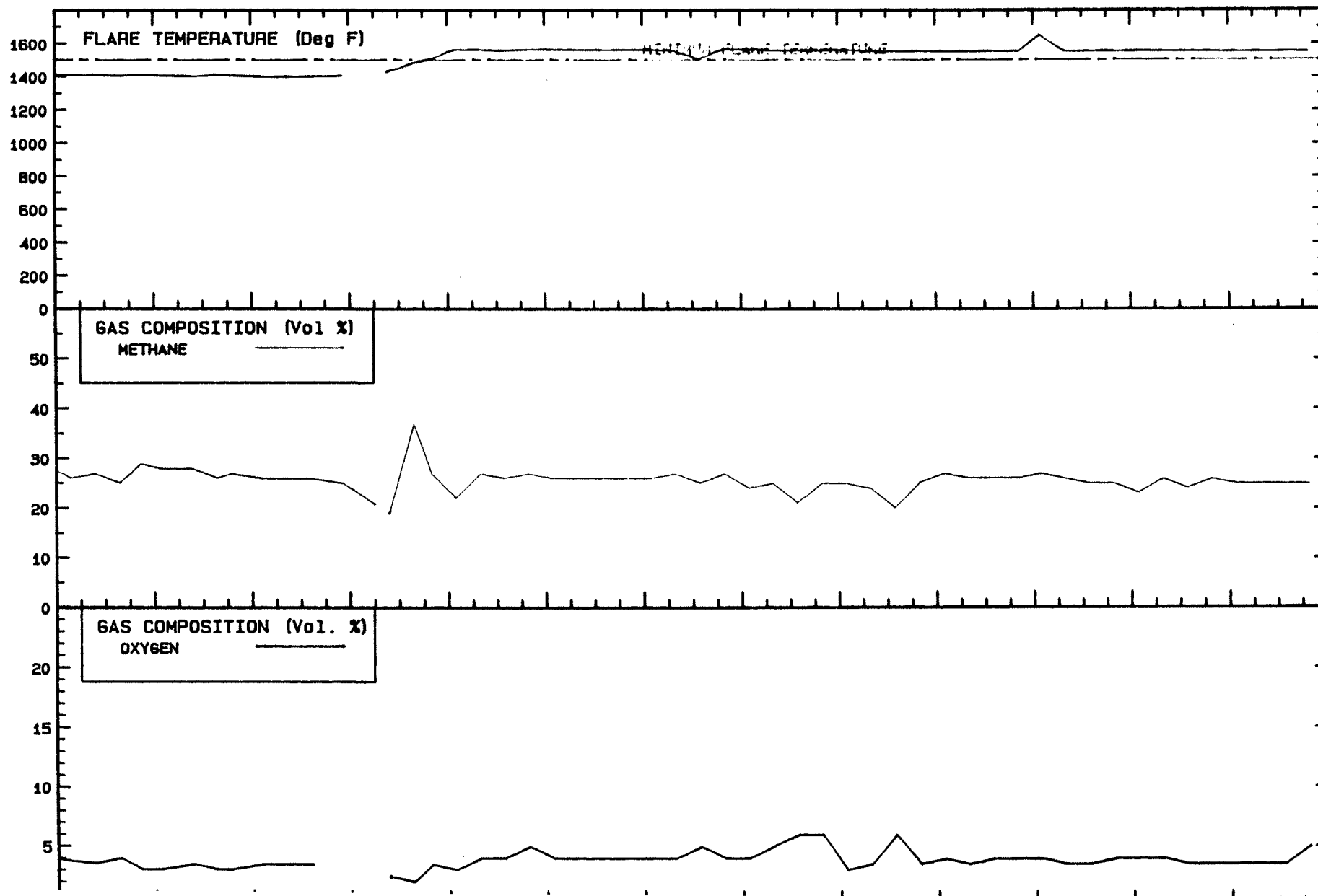
MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
11B	0	0	0	3	1.5
18B	0	TRC	0	0	0
22A	0	0	0	NRD	0

TRC = TRACE OF CH<sub>4</sub>; NRD = NOT REPORTED

### 3. ALL PROBES

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING OCTOBER 1, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 29 SEP 90  
WEEKLY MONITORING PERIOD..... 5-SEP TO 26-SEP-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# 11B 1.5% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 9-26-90

### 1. FLARE STATION DATA

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1550	1550	1552
METHANE (Vol %)	26	25	25	25	25
OXYGEN (Vol %)	3.5	3.5	3.5	3.5	5.0
VACUUM (In. H2O)	-21	-21	-20	-20	-21
BACK PRESS. (In. H2O)	25.0	25.0	25.0	25.0	26.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

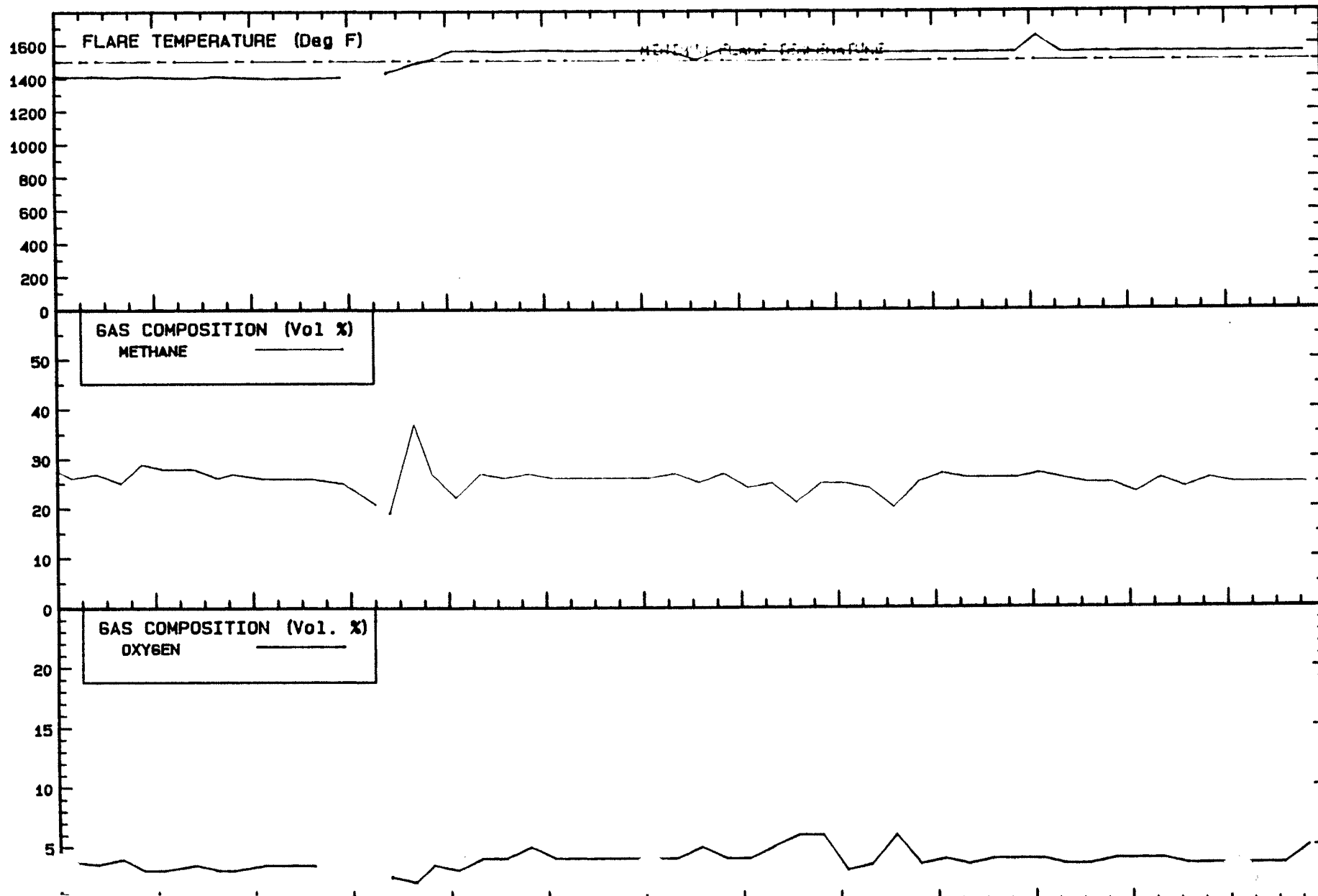
MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
11B	0	0	0	3	1.5
18B	0	TRC	0	0	0
22A	0	0	0	NRD	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

### 3. ALL PROBES

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING OCTOBER 1, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 29 SEP 90  
WEEKLY MONITORING PERIOD..... 5-SEP TO 26-SEP-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# 11B 1.5% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 9-26-90

### 1. FLARE STATION DATA

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1550	1550	1552
METHANE (Vol %)	26	25	25	25	25
OXYGEN (Vol %)	3.5	3.5	3.5	3.5	5.0
VACUUM (In. H2O)	-21	-21	-20	-20	-21
BACK PRESS. (In. H2O)	25.0	25.0	25.0	25.0	26.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
11B	0	0	0	3	1.5
18B	0	TRC	0	0	0
22A	0	0	0	NRD	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

### 3. ALL PROBES

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0

# EXHIBIT A (Continued)

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	3	1.5
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	TRC	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	NRD	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

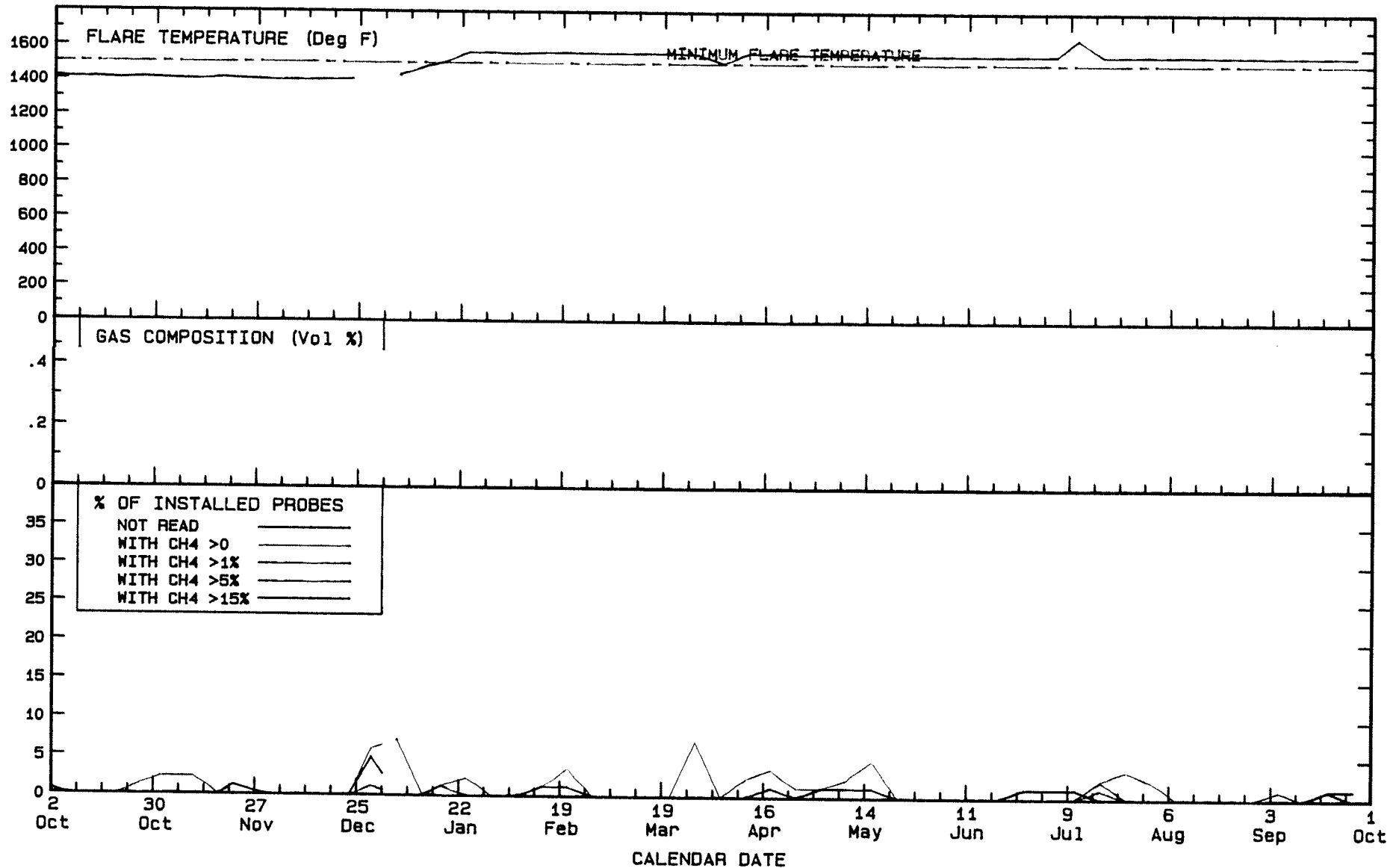
# EXHIBIT A (Continued)

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING OCTOBER 1, 1990**



# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 9-26-90

### 1. FLARE STATION DATA

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1550	1550	1552
METHANE (Vol %)	26	25	25	25	25
OXYGEN (Vol %)	3.5	3.5	3.5	3.5	5.0
VACUUM (In. H2O)	-21	-21	-20	-20	-21
BACK PRESS. (In. H2O)	25.0	25.0	25.0	25.0	26.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

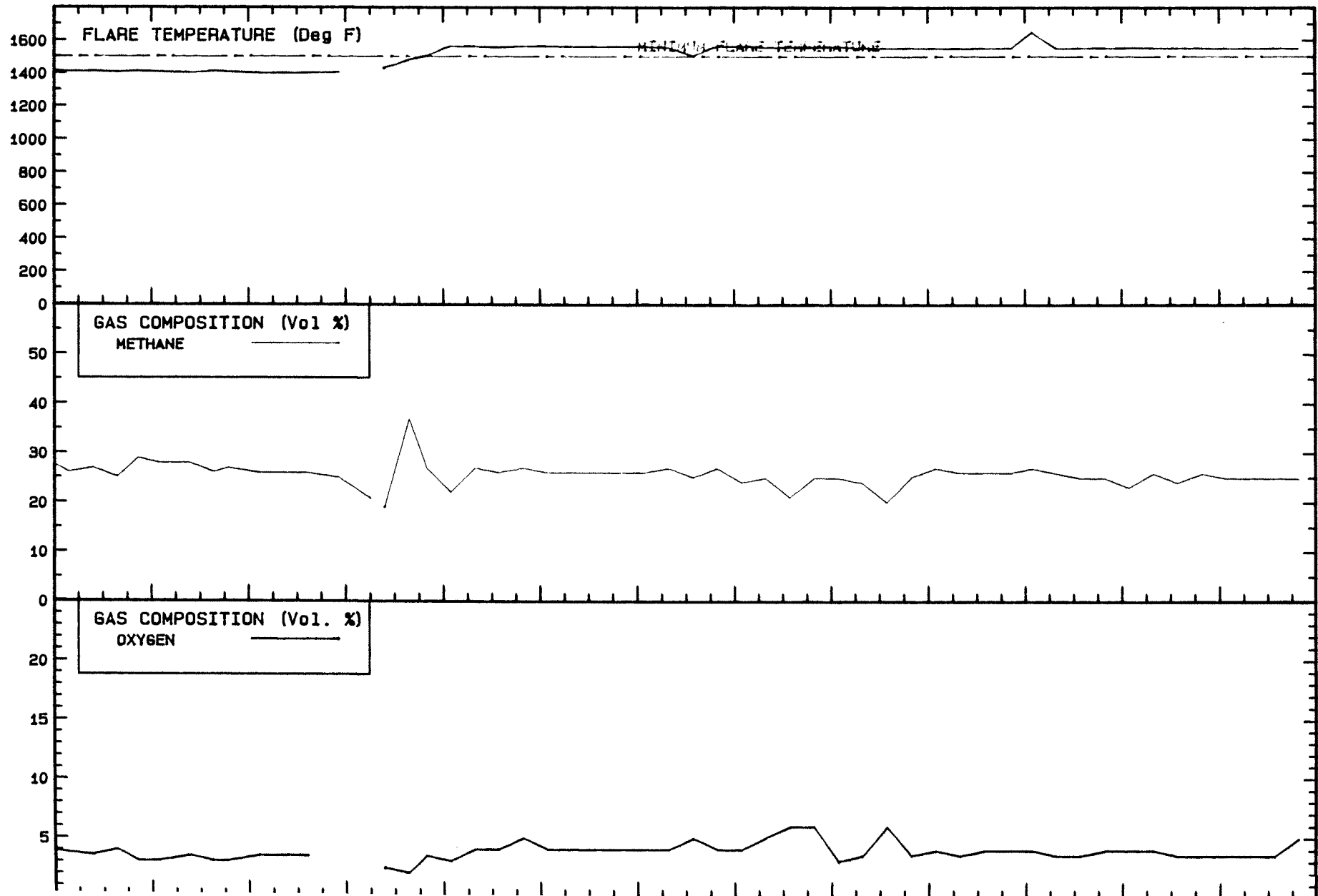
MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
11B	0	0	0	3	1.5
18B	0	TRC	0	0	0
22A	0	0	0	NRD	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

### 3. ALL PROBES

MONITORING DATE	8-29	9-5	9-12	9-19	9-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING OCTOBER 1, 1990





EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6 NOV 90  
WEEKLY MONITORING PERIOD..... 3-OCT TO 31-OCT-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	81
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	1
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# SELF STORAGE      TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

# 38      NOT RECORDED

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 11-28-90

### 1. FLARE STATION DATA

MONITORING DATE	10-31	11-7	11-14	11-21	11-28
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1543	1550	1553
METHANE (Vol %)	29	25	28	24	24
OXYGEN (Vol %)	4.0	5.0	5.5	5.0	5.5
VACUUM (In. H2O)	-22	-21	-20	-20	-21
BACK PRESS. (In. H2O)	24.5	27.0	27.0	26.0	29.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	10-31	11-7	11-14	11-21	11-28
PROBE	VOLUME % METHANE				
SELF STORAGE	5	0	2	0	TRC
11B	15	3.25	11	0	0
36B	0	0	TRC	0	0
37	0	0	TRC	0	0
38	0	0	TRC	0	NRD
40	0	TRC	TRC	0	0
41	0	TRC	TRC	0	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	10-31	11-7	11-14	11-21	11-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	<b>5</b>	0	<b>2</b>	0	<b>TRC</b>
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	<b>15</b>	<b>3.25</b>	<b>11</b>	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

MONITORING DATE	10-31	11-7	11-14	11-21	11-28
PROBE	VOLUME % METHANE				
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	TRC	0	0
37	0	0	TRC	0	0
38	0	0	TRC	0	NRD
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	TRC	TRC	0	0
41	0	TRC	TRC	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0

TRC = TRACE OF CH<sub>4</sub>; NRD = NOT REPORTED

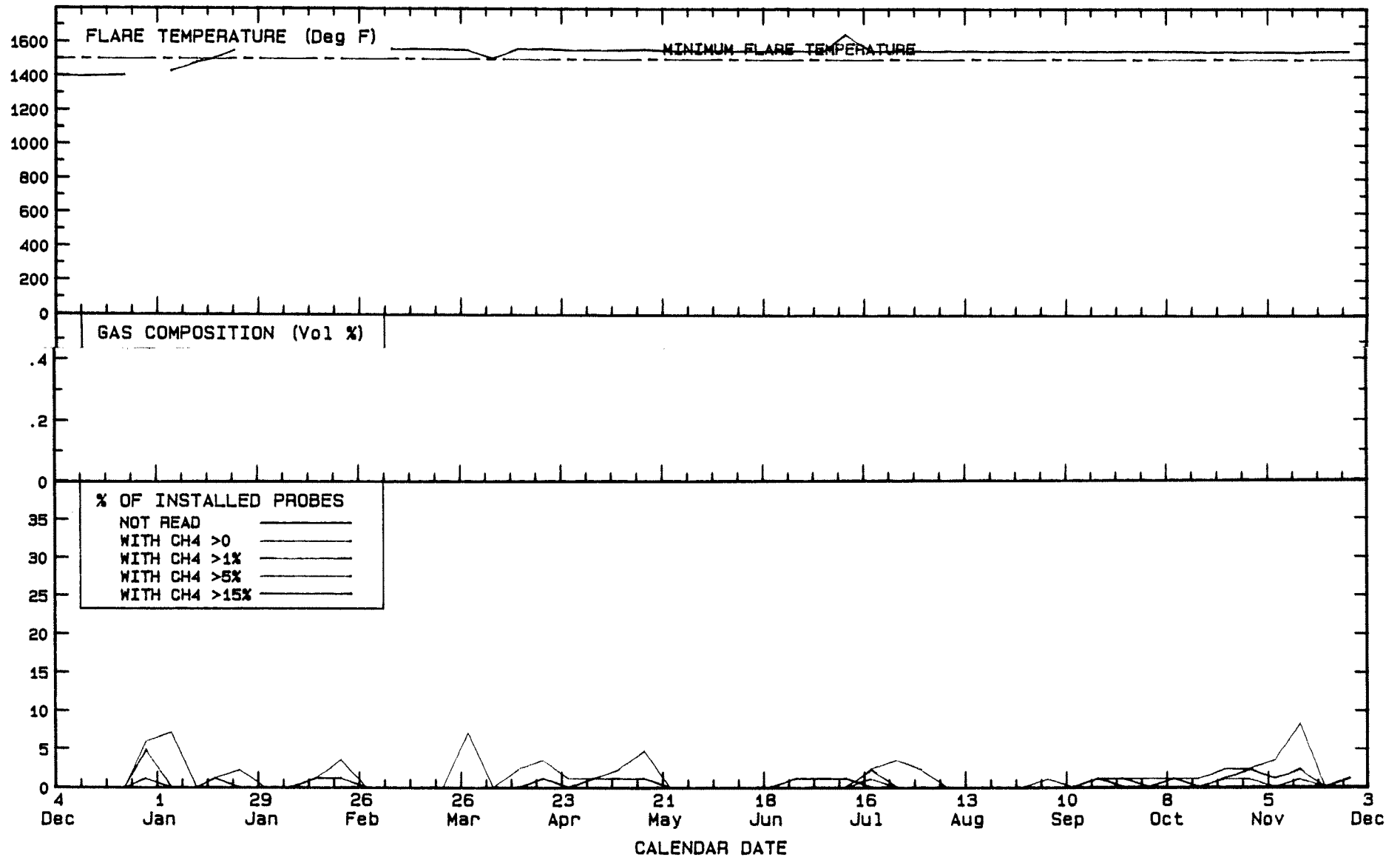
EXHIBIT A (Continued)

MONITORING DATE	10-31	11-7	11-14	11-21	11-28
PROBE	VOLUME % METHANE				
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING DECEMBER 3, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6 NOV 90  
WEEKLY MONITORING PERIOD..... 3-OCT TO 31-OCT-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	81
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	1
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# 11B 15% METHANE  
# SELF STORAGE TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 10-31-90

### 1. FLARE STATION DATA

MONITORING DATE	10-3	10-10	10-17	10-24	10-31
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1552	1553	1547	1550	1550
METHANE (Vol %)	26	25	25	24	29
OXYGEN (Vol %)	5.0	5.0	4.5	4.0	4.0
VACUUM (In. H2O)	-21	-22	-21	-21	-22
BACK PRESS. (In. H2O)	25.0	26.0	25.0	24.5	24.5
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	10-3	10-10	10-17	10-24	10-31
PROBE	VOLUME % METHANE				
SELF STORAGE	TRC	0	TRC	0.5	5
118	0	1.5	0	10	15

TRC = TRACE OF CH4

### 3. ALL PROBES

MONITORING DATE	10-3	10-10	10-17	10-24	10-31
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	TRC	0	TRC	0.5	5
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

MONITORING DATE	10-3	10-10	10-17	10-24	10-31
PROBE	VOLUME % METHANE				
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	1.5	0	10	15
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0

# EXHIBIT A (Continued)

MONITORING DATE	10-3	10-10	10-17	10-24	10-31
PROBE	VOLUME % METHANE				
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 6 NOV 90  
WEEKLY MONITORING PERIOD..... 3-OCT TO 31-OCT-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	81
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	1
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# SELF STORAGE    TRACE OF METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

# 38    NOT RECORDED

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 11-28-90

### 1. FLARE STATION DATA

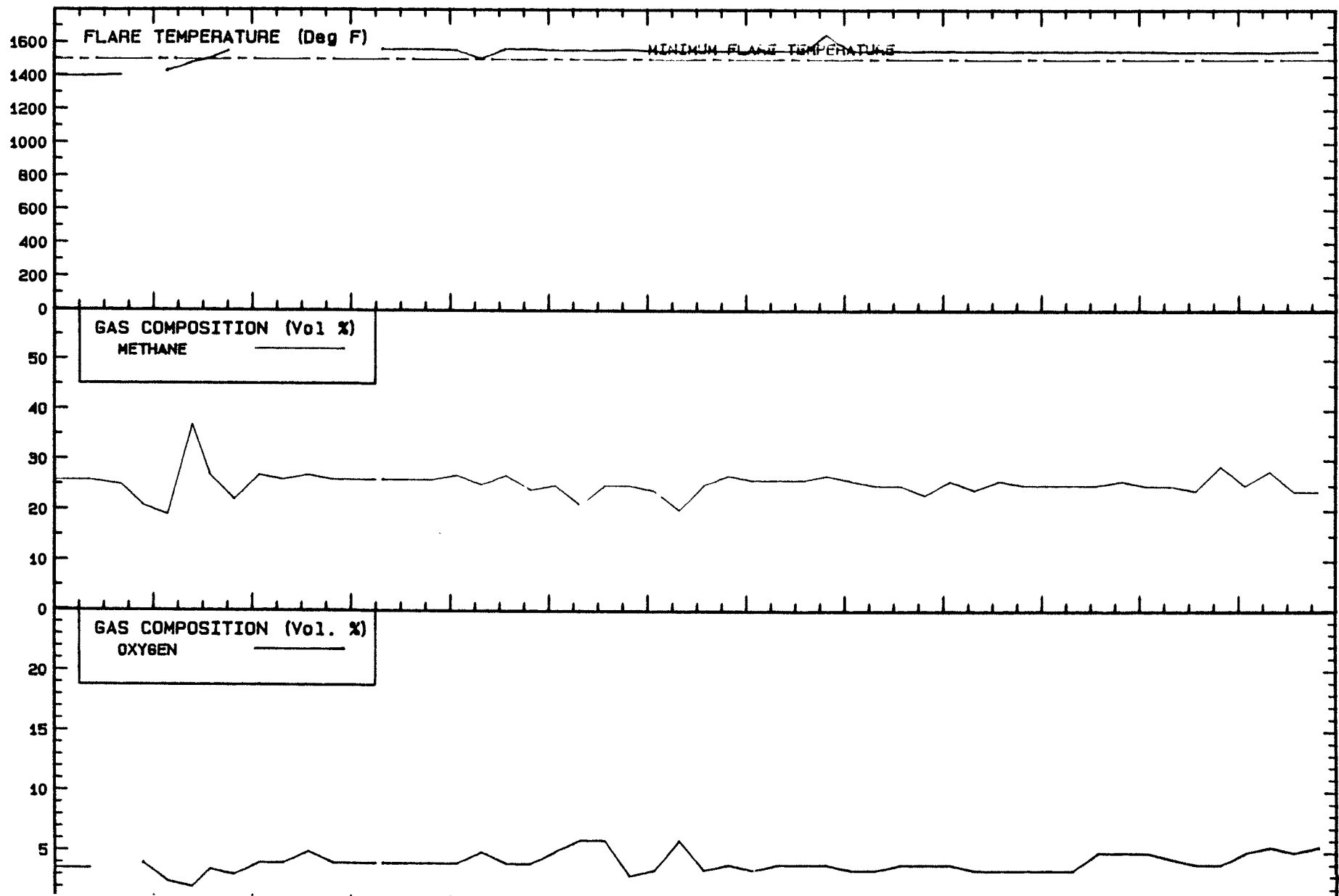
MONITORING DATE	10-31	11-7	11-14	11-21	11-28
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1550	1550	1543	1550	1553
METHANE (Vol %)	29	25	28	24	24
OXYGEN (Vol %)	4.0	5.0	5.5	5.0	5.5
VACUUM (In. H2O)	-22	-21	-20	-20	-21
BACK PRESS. (In. H2O)	24.5	27.0	27.0	26.0	29.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	10-31	11-7	11-14	11-21	11-28
PROBE	VOLUME % METHANE				
SELF STORAGE	5	0	2	0	TRC
11B	15	3.25	11	0	0
36B	0	0	TRC	0	0
37	0	0	TRC	0	0
38	0	0	TRC	0	NRD
40	0	TRC	TRC	0	0
41	0	TRC	TRC	0	0

TRC = TRACE OF CH<sub>4</sub>; NRD = NOT REPORTED

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING DECEMBER 3, 1990



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 7-DEC-88  
WEEKLY MONITORING PERIOD..... 1-NOV TO 30-NOV-88

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	93
NO. OF PROBES MONITORED.....	76
NO. OF PROBES WITH NO METHANE.....	76
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES, INC.

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

## EXHIBIT A

### MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 11-30-88

#### 1. FLARE STATION DATA

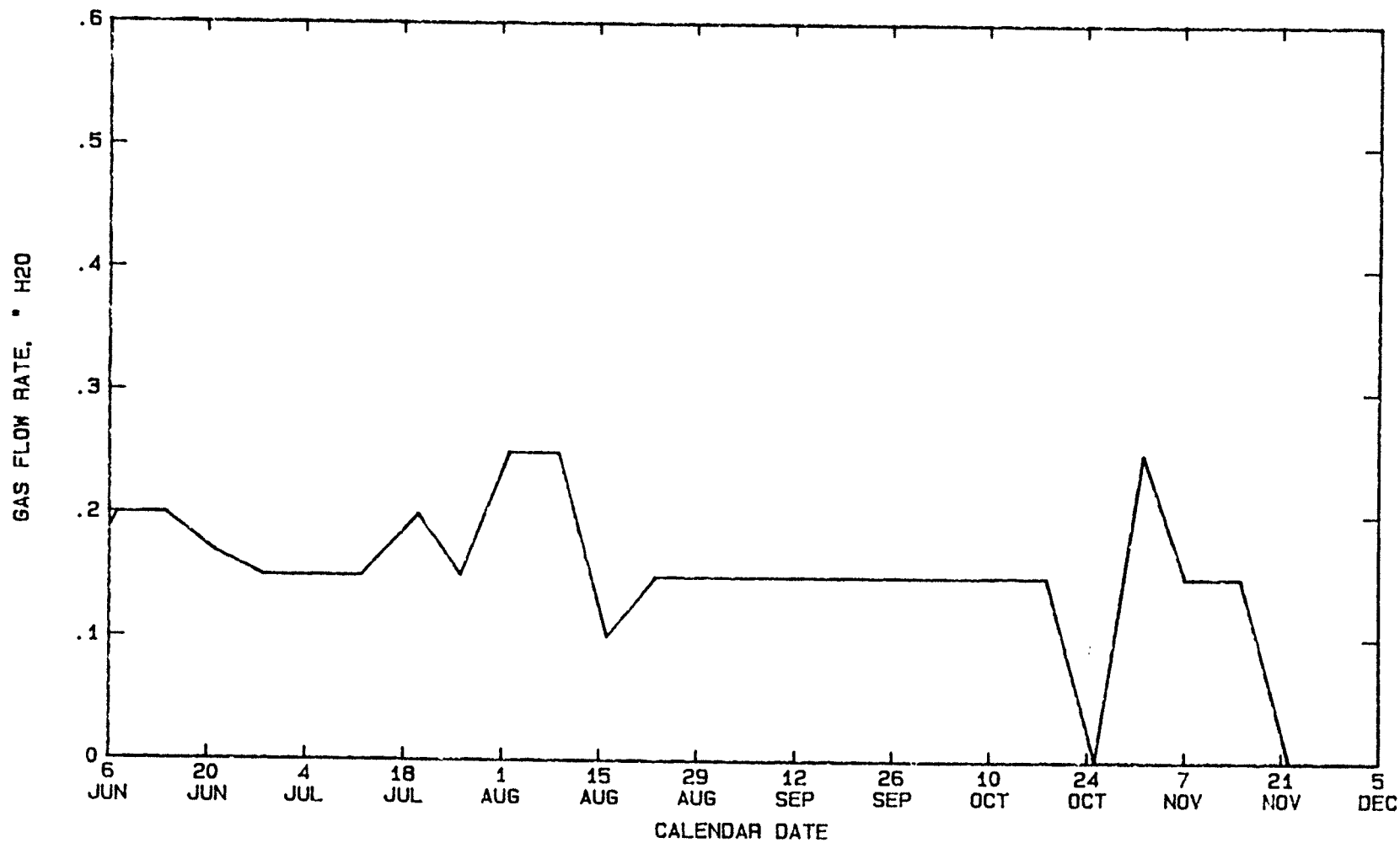
MONITORING DATE	11-1	11-7	11-15	11-22	11-30
MONITORING TIME					
FLARE TEMPERATURE, deg F		1025	1175	1175	1200
VOLUME % CH <sub>4</sub>	22	20	21	21	21
VOLUME % O <sub>2</sub>	3.5	4.5	4	4	4
VACUUM, INCHES H <sub>2</sub> O	28	28	29	28	28
BACK PRESS., INCHES H <sub>2</sub> O	3	3	3	3	3
GAS FLOW RATE, INCHES H <sub>2</sub> O	0.25	0.15	0.15		

#### 2. PROBLEM PROBES

MONITORING DATE	11-1	11-7	11-15	11-22	11-30
PROBE NUMBER					

(Continued on next page)

EXHIBIT E  
GAS FLOW RATE  
HEWITT LANDFILL  
SIX MONTHS ENDING 12-5-88



EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 3 JAN 91  
WEEKLY MONITORING PERIOD..... 5-DEC TO 26-DEC-90

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	83
NO. OF PROBES MONITORED.....	83
NO. OF PROBES WITH NO METHANE.....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	1
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0
NO. OF PROBES NOT REPORTED.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

# SELF STORAGE    0.3% METHANE

PROBES REQUIRING MAINTENANCE, AND OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES. INC.  
(213) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 12-26-90

### 1. FLARE STATION DATA

MONITORING DATE	11-28	12-5	12-12	12-19	12-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1553	1550	1554	1546	1551
METHANE (Vol %)	24	24	26	27	25
OXYGEN (Vol %)	5.5	6.5	6.0	5.0	5.0
VACUUM (In. H2O)	-21	-19	-19	-19	-19
BACK PRESS. (In. H2O)	29.0	29.0	30.0	30.0	30.0
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	11-28	12-5	12-12	12-19	12-26
PROBE	VOLUME % METHANE				
SELF STORAGE	TRC	TRC	8	0.5	0.3
11B	0	10	2	0	0
3B	NRD	NRD	0	NRD	0
3BB	0	0	NRD	0	0

TRC = TRACE OF CH4; NRD = NOT REPORTED

### 3. ALL PROBES

MONITORING DATE	11-28	12-5	12-12	12-19	12-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	TRC	TRC	8	0.5	0.3
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0

TRC = TRACE OF CH4

# EXHIBIT A (Continued)

MONITORING DATE	11-28	12-5	12-12	12-19	12-26
PROBE	VOLUME % METHANE				
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	<b>10</b>	<b>2</b>	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0
25	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0

# EXHIBIT A (Continued)

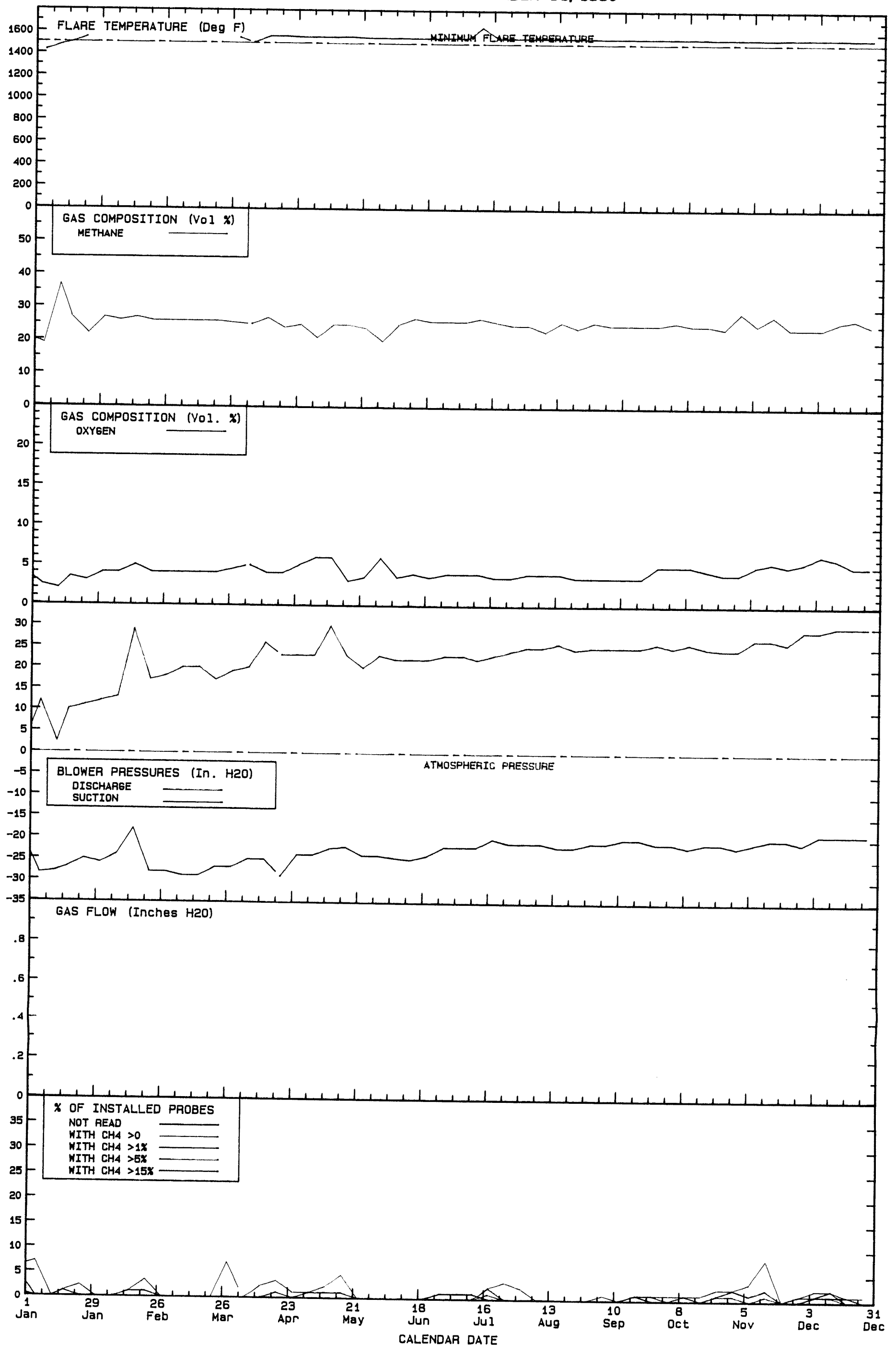
MONITORING DATE	11-28	12-5	12-12	12-19	12-26
PROBE	VOLUME % METHANE				
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	NRD	NRD	0	NRD	0
38B	0	0	NRD	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

NRD = NOT REPORTED

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING DECEMBER 31, 1990





## SCS FIELD SERVICES

February 25, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of January 1 through 31, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.



### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well No. 5A, all monitoring wells tested exhibited no methane gas detected throughout the reporting period. The levels of methane gas detected at Monitoring Well No. 5A (up to 1.3 percent by volume) were well below the LEL and are believed to be the result of unscheduled shut-downs (e.g., power outages during earthquake, etc.) of the Blower/Flare Station.

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair. In addition, Monitoring Well No. 43 could not be located during the entire reporting period due to being buried during landscaping activities performed by others in November 1993. Finally, Monitoring Well No. 39 was observed to be plugged during the majority of the reporting period. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated methane gas concentrations (up to 5.3 percent by volume at Storage Container No. H-37) were detected beneath several self storage containers. In addition, elevated methane gas concentrations were detected within cracks at surrounding asphalt areas. Again, SCS-FS believes some of the elevated methane gas concentrations can be attributed to unscheduled shut-downs experienced during the reporting period. The two recently installed extraction wells in the vicinity of the self storage containers exhibiting the highest concentrations of methane gas appear to have been successful in reducing, although not eliminating, LFG emissions in this area. SCS-FS will continue to test this area to determine if these wells can consistently control the elevated LFG emissions previously observed.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 64 to 135 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1575 degrees Fahrenheit. All other operating parameters remained within the prescribed limits.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

As previously reported, the condensate return pump flow totalizer (measured in gallons) appears to have malfunctioned. The totalizer has been delivered to the manufacturer for repair and is scheduled to be reinstalled in February 1994. In addition, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

During the reporting period several unscheduled BFS shut-downs occurred and are described below:

- January 18, 1994, - emergency response (including troubleshooting, repairs, and restart of the system) to site after January 17, 1994 earthquake,
- January 19, 1994, - emergency response to site after receiving notification of system failure from on-site Cal Mat staff. Response included repair of the LFG condensate return system,
- January 22, 1994, - emergency response and replacement of failed main actuator valve. Response included delivery of the failed valve to the manufacturer for repair,
- January 27, 1994 - emergency response to repair the LFG collection header damaged by earthquake repairs being conducted on the adjacent property,

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-16, W-20, W-21, W-23, W-24, W-25, W-27, W-28A, W-30, W-31, W-32, W-33, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

On January 4 and 5, 1994, SCS-FS completed the work scope contained in our proposal dated January 3, 1994. Briefly, this work consisted of resloping and burying three above-grade header line in the LA Auto Salvage Lot. This work should provide better accessibility to all areas of the lot by LA Auto Salvage employees, as well as, better protect the collection header from the heavy equipment traffic.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between MW-3B through MW-7, MW-1, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

On January 25, 1994, SCS-FS repaired cracking along the refuse/native interface that was created during the earthquake. This work should help inhibit LFG emissions from the landfill and air infiltration into the landfill.

Finally, vegetation overgrowth has been observed in the dog leg area and in the vicinity of Monitoring Wells No. 24, 24A, and Extraction Well No. W-16. **SCS-FS recommends this vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. On January 18, 1994, these quarterly activities were completed and are discussed below. The next quarterly site observation is scheduled to be conducted in April 1994.

Mr. George Cosby  
February 25, 1994  
Page Six

During these quarterly activities, SCS-FS completed repairs to the condensate trap between Perimeter Well Nos. P-24 and P-25 and replacement of the 2-inch Kanaflex hoses on ten perimeter extraction wells. Other minor repairs were completed as required.

During this and previous quarterly observations, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/11/94	P-1	ND	13.0	4.0	-0.28	-0.21	68	15.0	
01/11/94	P-2	ND	17.0	3.0	-0.28	0.02	67	6.4	
01/11/94	P-3	ND	19.0	ND	-0.28	0.01	71	1.5	
01/11/94	P-4	ND	20.0	ND	-0.28	0.01	72	1.6	
01/11/94	P-5	ND	17.0	2.0	-0.28	ND	74	0.0	
01/11/94	P-6	ND	17.0	3.0	-0.28	0.02	72	2.0	
01/11/94	P-7	ND	13.0	5.5	-0.28	0.03	74	4.0	
01/11/94	P-8	ND	14.0	4.0	-0.28	0.04	73	7.2	
01/11/94	P-9	ND	12.0	6.0	-0.28	0.03	78	3.5	
01/11/94	P-10	ND	12.0	7.0	-0.28	0.09	78	2.4	
01/11/94	P-11	ND	14.0	2.0	-0.28	0.06	76	2.4	
01/11/94	P-12	ND	14.0	3.0	-0.28	0.19	71	1.6	
01/11/94	P-13	ND	13.5	2.0	-0.28	0.26	72	2.4	
01/11/94	P-13A	9.0	1.3	20.0	-0.28	-0.08	94	11.5	
01/11/94	P-14	ND	13.5	3.0	-0.28	0.10	74	0.5	
01/11/94	P-15	ND	11.0	6.0	-0.28	0.12	76	1.6	
01/11/94	P-16	ND	16.0	2.0	-0.28	0.04	81	2.4	
01/11/94	P-17	ND	5.0	14.0	-0.30	0.22	74	1.5	
01/11/94	P-18	ND	18.0	1.0	-0.30	0.02	77	0.8	
01/11/94	P-19	1.0	11.0	7.0	-0.30	-0.32	78	33.6	
01/11/94	P-20	ND	15.5	4.0	-0.30	0.05	77	4.8	
01/11/94	P-21	4.0	11.0	10.0	-0.30	-0.21	101	30.4	
01/11/94	P-22	ND	14.0	3.0	-0.30	0.04	76	1.6	
01/11/94	P-23	ND	8.0	16.0	-0.30	0.02	77	0.8	
01/11/94	P-24	10.5	6.0	12.0	-0.30	-0.18	111	22.4	
01/11/94	P-25	13.0	8.5	17.5	-0.30	-0.28	119	39.2	
01/11/94	P-26	4.6	15.0	7.0	-0.32	-0.18	104	32.8	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/11/94	P-27	ND	15.0	4.0	-0.32	0.06	79	1.6	
01/11/94	P-28	20.0	1.2	26.0	-0.30	-0.16	135	16.8	
01/11/94	P-29	4.4	11.0	10.0	-0.28	-0.14	118	25.6	
01/11/94	P-30	8.0	9.0	14.0	-0.28	-0.12	119	18.4	
01/11/94	P-31	1.6	12.0	8.0	-0.28	-0.17	91	12.8	
01/11/94	P-32	1.0	17.0	3.0	-0.28	-0.06	87	5.6	
01/11/94	P-33	ND	17.0	2.0	-0.28	0.05	72	1.6	
01/11/94	P-34	ND	15.0	2.0	-0.28	0.04	77	1.6	
01/11/94	P-35	1.0	12.0	8.0	-0.28	-0.01	94	2.4	
01/11/94	P-36	3.7	10.7	9.0	-0.28	-0.08	107	10.8	
01/11/94	P-37	ND	18.0	4.0	-0.28	ND	77	0.8	
01/11/94	P-38	ND	6.0	11.0	-0.28	0.20	88	3.2	
01/11/94	P-39	ND	20.0	1.0	-0.28	0.07	80	4.8	
01/11/94	W-1	20.0	0.3	26.0	-0.22	-0.19	82	64.6	
01/11/94	W-2	18.0	0.2	25.0	-0.22	-0.06	74	58.9	
01/11/94	W-3	51.0	0.3	33.0	-0.21	-0.20	78	14.4	
01/11/94	W-4	33.0	0.2	31.0	-0.21	-0.18	82	25.6	
01/11/94	W-5	24.0	0.1	26.0	-0.21	-0.14	72	23.2	
01/11/94	W-6	24.0	0.5	26.0	-0.21	-0.21	72	98.8	
01/11/94	W-7	37.0	4.6	27.0	-0.21	-0.17	80	44.8	
01/11/94	W-8	24.0	ND	28.0	-0.22	-0.14	86	21.6	
01/11/94	W-9	10.0	6.0	14.0	-0.24	-0.08	68	53.2	
01/11/94	W-10	28.0	ND	29.0	-0.28	-0.07	70	70.3	
01/11/94	W-11	24.0	0.2	28.0	-0.30	-0.12	68	98.8	
01/11/94	W-12	0.4	19.0	2.0	-0.34	-0.01	68	11.4	
01/11/94	W-13	18.0	0.7	25.0	-0.39	-0.08	66	74.1	
01/11/94	W-14	18.0	0.7	26.0	-0.44	-0.06	109	55.1	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/11/94	W-15	1.0	19.5	4.0	-0.47	-0.14	64	167.2	
01/11/94	W-16	31.0	0.4	31.0	-0.82	-0.24	91	96.9	VEGETATION NEEDS REMOVAL
01/11/94	W-17	39.0	0.2	32.0	-0.82	-0.08	84	53.2	ADJUSTED TO -0.18
01/11/94	W-18	29.0	0.4	31.0	-0.82	-0.16	86	39.9	
01/11/94	W-20	44.0	0.1	32.0	-0.21	-0.08	72	22.8	ADJUSTED HEADER FLOW
01/11/94	W-21	48.0	0.3	38.0	-0.21	-0.19	91	31.2	ADJUSTED HEADER FLOW
01/11/94	W-23	44.0	0.2	38.0	-30.0	-0.48	84	127.3	ADJUSTED TO -0.69
01/11/94	W-24	33.0	1.2	38.0	-30.0	-0.04	73	22.8	ADJUSTED TO -0.28
01/11/94	W-25	58.0	0.4	42.0	-30.0	-27.5	84	63.2	
01/11/94	W-26	11.0	1.8	21.0	-30.0	-0.23	81	41.8	
01/11/94	W-27	53.0	0.2	42.0	-30.0	-4.90	85	697.3	ADJUSTED TO -6.50
01/11/94	W-28	23.0	0.7	28.0	-30.0	-0.16	76	79.8	
01/11/94	W-28A	36.0	1.3	31.0	-30.0	-1.30	126	55.2	
01/11/94	W-28B	31.0	2.4	29.0	-30.0	-0.38	116	148.2	ADJUSTED TO -0.20
01/11/94	W-29	29.0	3.1	28.0	-29.0	-2.10	119	264.1	ADJUSTED TO -1.40
01/11/94	W-29A	0.4	0.6	16.0	-29.0	-0.22	74	13.3	
01/11/94	W-30	37.0	0.4	32.0	-30.0	-2.50	68	44.0	
01/11/94	W-31	51.0	0.4	38.0	-30.0	-25.0	95	53.6	
01/11/94	W-32	31.0	0.2	34.0	-30.0	-0.28	94	38.4	
01/11/94	W-33	23.0	1.6	27.0	-30.0	-10.5	114	222.3	
01/11/94	W-36	33.0	3.1	36.0	-30.0	-21.0	101	368.6	ADJUSTED TO -15.0
01/11/94	W-37	29.0	1.4	34.0	-30.0	-21.5	93	197.6	
01/11/94	W-37A	11.0	0.6	22.0	-17.5	-0.11	96	22.4	
01/11/94	W-37B	18.0	0.5	24.0	-17.5	-0.08	109	17.6	
01/11/94	W-38	0.9	19.8	1.8	-30.0	-29.0	70	89.3	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

**SCS FIELD SERVICES**

February 25, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of January 1 through 31, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- With the exception of Monitoring Well No. 5A (up to 1.3 percent by volume), no methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair.
- Monitoring Well No. 39 was plugged during the entire reporting period.
- Monitoring Well No. 43 could not be located during the entire reporting period.
- Methane gas was detected beneath several self storage containers (up to 5.3 percent at Storage Container No. H-37). As of the date of this letter, decreased methane gas concentrations continues to be detected beneath several containers.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-16, W-20, W-21, W-23, W-24, W-25, W-27, W-28A, W-30, W-31, W-32, W-33, W-36, and W-38.

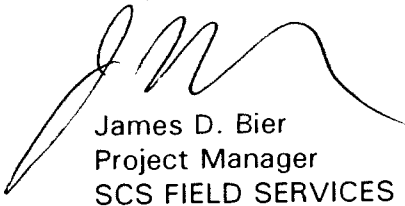


Mr. George Cosby  
February 25, 1994  
Page Two

- Surface cracks were observed along the site perimeter (especially between MW-3B through MW-7, MW-1, and Perimeter Extraction Well Nos. P-5 through P-39).
- Surface cracks within the paved area of the site have been observed in the vicinity of Self Storage Container Nos. F12 through 15, F18 through 35, B-16, H1 through H5, and D46.
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The malfunctioning LFG condensate return pump flow totalizer is being repaired by the manufacturer and is scheduled to be reinstalled during February 1994.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the dog leg area and in the vicinity of Monitoring Well Nos. 24, 24A, and Extraction Well No. W-16.
- The quarterly site observation was completed this month with minor repairs being completed as needed,
- Several unscheduled Blower/Flare Station shut-downs occurred during the reporting period (some were related to the January 17, 1994, earthquake).

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES



# Gas Control Engineering, Inc.

December 1, 1991  
1003-1

Mr. Ken Ellis  
South Coast Air Quality Management District  
Toxics Unit, Engineering Division  
21865 Copley Drive  
Diamond Bar, California 91765-4182

**Subject: Air Toxics Inventory Report for Hewitt Landfill (Facility ID 3530)**

Dear Mr. Ellis:

Enclosed is the 1990 air toxics inventory report for Hewitt Landfill. Because all of the appendix A1 compounds are below the applicable degree of accuracy, they have been listed on form S-UP. All items requested on the "Checklist for 1990 ATIR Submission" have been included. Additionally, calculations showing the worst case flare emissions, a copy of the 1990 flare source test report and an area map of the landfill are included in attachment 1, 2 and 3 respectively.

Should you have any questions on this submittal please contact:

Dick Prosser  
Gas Control Engineering  
5362 Lindford Lane  
Yorba Linda, California 92686  
(714) 777-2863

CALMAT -  
FILE COPY  
AB2588 COMPLIANCE  
REPORT FOR  
HEWITT LANDFILL.

Very truly yours,



Dick Prosser

cc: George Cosby

1990

9150 Flair Drive  
El Monte, CA 91731

1990

ATTN: ENGINEERING DIVISION (TOXICS UNIT)

AB 2588 AIR TOXICS INVENTORY REPORT  
APPLICATION FORM

1990

Company Name:

CALMAT PROPERTIES CO

Mailing Address:

3200 SAN FERNANDO ROAD

LOS ANGELES, CALIF. 90065

Facility Address:

7361 LAUREL CANYON BLVD.

N. HOLLYWOOD, CALIF. 91605

Facility AQMD ID #:

3530

(From your plan approval letter)

Contact Person (Company Official):

GEORGE COSBY

Telephone #:

213 258-2777

Report Preparer (If not a Company Official):

DICK PROSSER

Telephone #:

714 777-2863

Signature of the Report Preparer:

*R. Prosser*

Signature of Responsible Company Official:

THIS FORM MUST BE FILLED OUT AND MAILED WITH THE INVENTORY REPORT

Plan Date

1990

1990

## FACILITY EMISSION SUMMARY FORM

1990

COMPANY		AQMD ID	
APPENDIX A-I SUBSTANCES		FACILITYWIDE EMISSIONS	
AIR TOXIC NAME	CAS NO.	MAXIMUM LBS/HR	AVERAGE LBS/YR
BENZENE	71-43-2	9.3E-04	8.2
CHLOROBENZENE	108-90-7	9.3E-04	8.1
CHLOROFORM	67-66-3	9.3E-04	8.1
CARBON TETRACHLORIDE	56-23-5	9.4E-04	8.2
1,2 DICHLOROETHANE	107-06-02	9.4E-04	8.2
HYDROGEN SULFIDE	77-830-64	7.9E-04	6.9
METHYLENE CHLORIDE	75-09-2	9.4E-04	8.2
TETRACHLOROETHENE	127-18-4	9.5E-04	8.3
TRICHLOROETHYLENE	79-01-6	9.2E-04	8.1
1,1,1 TRICHLOROETHANE	71-55-6	9.4E-04	8.2
1,4 DICHLOROBENZENE	106-46-7	9.2E-04	8.1
TOLUENE	108-88-3	3.5E-03	30.7
VINYL CHLORIDE	75-01-4	9.4E-04	8.2
TOTAL XYLENES	1115	1.3E-03	11.7
1,1 DICHLOROETHENE	75-35-4	9.4E-04	8.2

THE INVENTORY SHOULD BE FOR THE PERIOD JAN 1, 1990 THRU DEC 31, 1990

ENG:

AB 2588 ATIR 90

Facility SCAQMD ID# 3530

Company Name CALMAT PROPERTIES CO.

Facility Location Address 7361 LAUREL CANYON BLVD, N. HOLLYWOOD CA 91605

Receptor Proximity Form for AB-2588 Air Toxics "Hot Spots" Prioritization

Please provide answers to the following questions in terms of meters. 100 meters is equal to about 108 yards or 325 feet. If your measurements are originally in feet or yards, please convert them to meters. (Meters = Feet X 0.3048)

1. What is the closest distance between any source of air toxic emissions at your facility and the property boundary of any one of these receptors -- other business, work-site, school, day-care center, shopping center, park, or hospital?

Less than 50 meters (160 feet)  
☒ Less than 100 meters ☐ Less than 1,500 meters  
☐ Less than 250 meters ☐ Less than 2,000 meters  
☐ Less than 500 meters ☐ Greater than 2,000 meters  
☐ Less than 1,000 meters (1,080 yards) RECEPTOR TYPE OTHER BUSINESS

Place check mark in front of appropriate distance category and indicate type of receptor.  
Please note that vacant commercial/industrial lots will also be considered work places.

Important! If distance is less than 250 meters ( 270 yards or 810 feet ) and more than 50 meters ( 54 yards or 160 feet ), provide actual distance in meters.

95 meters.

2. What is the closest distance between any source of air toxic emissions at your facility and the property boundary of any one of these receptors -- house, apartment, convalescent home, trailer park, or other residence?

Less than 50 meters (160 feet)  
☐ Less than 100 meters ☐ Less than 1,500 meters  
☒ Less than 250 meters ☐ Less than 2,000 meters  
☐ Less than 500 meters ☐ Greater than 2,000 meters  
☐ Less than 1,000 meters (1,080 yards) RECEPTOR TYPE HOUSE

Place check mark in front of appropriate distance category and indicate type of receptor.  
Please note that vacant lots zoned as residential will also be considered residences.

Important! If distance is less than 250 meters ( 270 yards or 810 feet ) and more than 50 meters ( 54 yards or 160 feet ), provide actual distance in meters.

245 meters.

Documentation must be provided to support the distance information provided. Include copies of appropriate maps with map scale (in feet, meters, etc.). U.S. Geological Survey (7 1/2 minute), "Thomas Brothers Guide", "Auto Club" or other similar maps are acceptable if the map provides sufficient detail.

EMISSION  
YEAR  
19 90

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
FACILITY DESCRIPTION

FORM  
FAC

FACILITY DATA

COMPANY NAME

CALMAT PROPERTIES CO.

ADDRESS

7361 LAUREL CANYON BLVD.

CITY

N. HOLLYWOOD CA.

ZIP CODE

91605

FOR OFFICE USE ONLY

COUNTY  
ID:

FACILITY ID:

ACTION CODE:

DISTRICT:

AIR BASIN CODE:

CITY CODE  
(OPTIONAL)

AQCR  
(OPTIONAL)

SUBCOUNTY ID

FACD1 (OPTIONAL)

FACD2 (OPTIONAL)

UTM ZONE

UTM EAST

UTM NORTH

CONTACT PERSON

DICK PROSSER

TELEPHONE

714-777-2863

FACILITY SIC

9511

NUMBER OF EMPLOYEES

4

MAILING ADDRESS DATA

COMPANY NAME

CALMAT PROPERTIES CO.

ADDRESS

3200 SAN FERNANDO ROAD

CITY

LOS ANGELES

STATE

CA

ZIP CODE

90065

ATTENTION

GEORGE COSBY

NAME: Dick Prosser

DATE: 12/2/91

ARB/FAC/080283

EMISSION  
YEAR  
19 90AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
STACK DATAFORM  
STK

FOR OFFICE USE ONLY

COUNTY ID:

FACILITY ID:

DO NOT DELETE STACK IF IT SERVES OTHER DEVICES. SEE INSTRUCTIONS

DESC  
CODE

STACK/VENT CATEGORY

REQUIRED INFORMATION

AMBIENT TEMP & LOW-VELOCITY EXHAUST IT W/IN 25 F OF AMBIENT & V LT 750 FPM

- |   |   |                                |
|---|---|--------------------------------|
| 1 | RELEASE POINT (RP) AT GROUND-LEVEL  | STACK ID & CODE ONLY           |
| 2 | RELEASE FROM BLDG HVAC ONLY   | STACK ID, CODE, & STACK HEIGHT |
| 3 | RP W/IN (2.5 X HB) ABOVE GROUND AND<br>W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | STACK ID, CODE & STACK HEIGHT  |
| 4 | OTHER STACK/VENT (LOW T.V)  | STACK ID, CODE & STACK HEIGHT  |

OTHER TEMP & FLOW CONDITIONS

- |   |   |                       |
|---|---|-----------------------|
| 5 | RP W/IN (2.5 X HB) ABOVE GROUND AND<br>W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG | ALL STACK INFORMATION |
| 6 | OTHER STACK/VENT (OTHER T.V)  | ALL STACK INFORMATION |

WHERE HB = HEIGHT OF NEAREST BUILDING

AND HVAC = HEATING, VENTILATING AND AIR CONDITIONING

OFC USE

ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)\*\*\*\*\* EXHAUST \*\*\*\*\*  
GAS  
TEMP (F)GAS FLOW RATE  
(CFM)

\*OFC USE ONLY\*

UTM EAST  
(KILOMETER)UTM NORTH  
(KILOMETER)ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)GAS  
TEMP (F)GAS FLOW RATE  
(CFM)UTM EAST  
(KILOMETER)UTM NORTH  
(KILOMETER)ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)GAS  
TEMP (F)GAS FLOW RATE  
(CFM)UTM EAST  
(KILOMETER)UTM NORTH  
(KILOMETER)ACTION  
CODESTACK  
IDDESC HEIGHT ABOVE  
CODE GROUND (FEET)DIAMETER  
(FEET)GAS  
TEMP (F)GAS FLOW RATE  
(CFM)UTM EAST  
(KILOMETER)UTM NORTH  
(KILOMETER)NAME DICK PROSSERDATE 12/2/91

ARB/STK/890323

EMISSION  
YEAR  
19 90

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
DEVICE DESCRIPTION AND DEVICE-STACK RELATIONS

FORM  
DEV

FOR OFFICE USE ONLY

COUNTY ID:

FACILITY ID:

OFFICE USE

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV

70001

FLARE

STACK ID

PERMIT ID (IF AVAILABLE)

90001

164827

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV

ACTION  
CODE

DEVICE  
ID

DEVICE NAME

NBR OF DEV

\*\*\*\*\* OFFICE USE ONLY \*\*\*\*\*  
\*\*\*\* EACH ITEM IS OPTIONAL \*\*\*\*

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

DEVD1

DEVICE  
GROUP

DEVD2

NAME DICK PROSSER

DATE 12/2/91

ARB/DEV/240389

EMISSION  
YEAR  
19 90

# AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT PROCESS AND EMITTENTS DATA

FORM  
**PRO**  
SIDE A

FOR OFFICE USE ONLY

PROCESS DESCRIPTION

SCC NO

COUNTY  
ID:

AIR  
BASIN

ACTION  
CODE

PROD1 (OPTIONAL)

PROD2 (OPTIONAL)

FACILITY ID:

STOP

FILL OUT ANY SUPPLEMENTAL PROCESS FORM(S) FOR THIS PROCESS FIRST. THEN FILL OUT THIS PAGE, SUBMITTING ONE FOR EACH EMITTING PROCESS IN YOUR FACILITY.

SECTION 1

PROCESS DATA

DEVICE  
I.D.

7 0 0 0 1

SIC

9 5 1 1

CONFIDENTIAL (Y/N)

IF Y CHECK SMALL BOXES  
AS APPROPRIATE

N

PROCESS EQUIPMENT DESCRIPTION

F L A R E

FUEL TYPE /OTHER PROCESS INFO

L A N D F I L L G A S

NOTE

USE 1 SPACE FOR EACH DECIMAL POINT

TOTAL YEARLY  
PROCESS RATE (UNITS/YR)

7 3 0

MAXIMUM HOURLY  
PROCESS RATE (UNITS/HR)

0 . 0 8 3

PROCESS UNITS

P T 0 7 4

HRS/  
DAY

2 4

DAYS/  
WEEK

7

WKS/  
YEAR

5 2

RELATIVE MONTHLY ACTIVITY (%)

C

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEP

OCT

NOV

DEC

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

8 . 3

OFFICE USE ONLY

ACTION  
CODE

ALLOWABLE EMIS  
LBS/YR(OPTIONAL)

SECTION 2 NOTE: ALL EMITTENTS ARE BELOW THE APPLICABLE DEGREE OF ACCURACY.  
EMITTENT DATA

EMITTENT ID

EST  
METH

ACTUAL EMISSIONS  
FACTOR(LBS/UNIT)

ANNUAL AVERAGE  
EMISSIONS (LBS/YR)

\*CONTROL EQPT CODES\*  
PRIMARY SECONDARY

OVERALL  
CONTROL EFF(%)

FULL/  
PART

HOURLY MAX EMISSIONS  
(LBS/HOUR)

EMITTENT ID

EST  
METH

ACTUAL EMISSIONS  
FACTOR(LBS/UNIT)

ANNUAL AVERAGE  
EMISSIONS (LBS/YR)

\*CONTROL EQPT CODES\*  
PRIMARY SECONDARY

OVERALL  
CONTROL EFF(%)

FULL/  
PART

HOURLY MAX EMISSIONS  
(LBS/HOUR)

NAME DICK PROSSER

DATE 12/2/91

ARB/PRO/890327

EMISSION  
YEAR  
1990

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT  
SUPPLEMENTAL PROCESS PARAMETER FORM  
SUBSTANCES USED, PRODUCED, OR OTHERWISE PRESENT

FORM  
**S-UP**

FACILITY NAME CALMAT PROPERTIES, CO.

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY  
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-II WHICH ARE  
USED, PRODUCED, OR OTHERWISE PRESENT.

PLEASE INDICATE (Y/N) UNDER THE APPROPRIATE CATEGORIES (USE, PRODUCTION, OR OTHER PRESENCE WITHIN YOUR FACILITY) OF ANY SUBSTANCE(S) LISTED IN APPENDIX A-II. "USED" REFERS TO SUBSTANCES WHICH ARE INGREDIENTS IN ANY ACTIVITY OR PROCESS AT YOUR FACILITY. "PRODUCED" REFERS TO SUBSTANCES WHICH ARE THE RESULT OF ANY ACTIVITY OR PROCESS TAKING PLACE IN YOUR FACILITY. "OTHERWISE PRESENT" REFERS TO SUBSTANCES PRESENT IN ANY OTHER WAY IN AN ACTIVITY OR PROCESS, SUCH AS BY-PRODUCTS OR REACTION INTERMEDIATES WHICH APPEAR TEMPORARILY DURING PROCESSING. PLEASE SPECIFY THE NATURE OF THE PRESENCE OF THE SUBSTANCE.

ALSO USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-I WHICH ARE PRESENT BELOW THE  
APPLICABLE DEGREE OF ACCURACY.

ALSO USE THIS FORM TO REPORT SUBSTANCES IN APPENDIX A-I AND APPENDIX A-II WHICH ARE USED,  
PRODUCED, OR OTHERWISE PRESENT AT ANY FACILITY SUBJECT TO THE REQUIREMENTS OF SECTION 93308(C)

FOR OFFICE USE ONLY

CO: ☐ AB: ☐

FACID: ☐

LISTED SUBSTANCE EMITTER ID	USED	PRODUCED	OTHERWISE PRESENT	(SPECIFY)
71-43-2	(N)	(N)	(Y)	IN LANDFILL GAS
108-90-7	(N)	(N)	(Y)	IN LANDFILL GAS
67-66-3	(N)	(N)	(Y)	IN LANDFILL GAS
56-23-5	(N)	(N)	(Y)	IN LANDFILL GAS
107-06-02	(N)	(N)	(Y)	IN LANDFILL GAS
77-830-64	(N)	(N)	(Y)	IN LANDFILL GAS
75-09-2	(N)	(N)	(Y)	IN LANDFILL GAS
127-18-4	(N)	(N)	(Y)	IN LANDFILL GAS
79-01-6	(N)	(N)	(Y)	IN LANDFILL GAS
71-55-6	(N)	(N)	(Y)	IN LANDFILL GAS
106-46-7	(N)	(N)	(Y)	IN LANDFILL GAS
108-88-3	(N)	(N)	(Y)	IN LANDFILL GAS
75-01-4	(N)	(N)	(Y)	IN LANDFILL GAS
1115	(N)	(N)	(Y)	IN LANDFILL GAS
75-35-4	(N)	(N)	(Y)	IN LANDFILL GAS
630080	(N)	(Y)	(N)	COMBUSTION BY PRODUCT

NAME: DICK PROSSER

DATE: 12/2/91

ARB/S-UP/90057

### CHECKLIST FOR 1990 ATIR SUBMISSION

- |             |     |  |    |
|-------------|-----|--|----|
| <u>✓</u>    | 1.  | AB2588 Air Toxics Inventory Report Application Form.   | OK |
| <u>✓</u>    | 2.  | Facility Emission Summary Form.  | OK |
| <u>✓</u>    | 3.  | Receptor Proximity Form for AB-2588 Air Toxics "Hot Spots" Prioritization.   | OK |
| <u>✓</u>    | 4.  | Facility Description (FAC) Form.   | OK |
| <u>✓</u>    | 5.  | Stack Data (STK) Form.   | OK |
| <u>✓</u>    | 6.  | Device Description and Device-Stack Relations (DEV) Form.  | OK |
| <u>✓</u>    | 7.  | Process and Emittents Data (PRO) Form: complete one PRO Form for each Process at each Device.  | OK |
| <u>✓</u>    | 8.  | Support documentation and calculations for each PRO Form: for each PRO Form include all quantification methods, emission factors, reference sources, calculations etc. Cross reference each page of calculation to the appropriate PRO Form.                 | OK |
| <u>✓</u>    | 9.  | Substances Used, Produced or Otherwise Present (S-UP) Form: for all substances on Appendix A-II. Those Appendix A-I substances that are emitted in quantities below the degree of accuracy may be listed here, but all backup calculations must be included. | OK |
| <u>    </u> | 10. | Stationary Combustion (S-CMB) Form.  |    |
| <u>    </u> | 11. | Cooling Tower (S-CT) Form.   |    |
| <u>    </u> | 12. | Metal Plating (S-MP) Form.   |    |
| <u>    </u> | 13. | Sterilization (S-ETO) Form.  |    |
| <u>✓</u>    | 14. | Source Test results and emission calculations.   | OK |
| <u>✓</u>    | 15. | Plot Plan: to scale, indicate adjacent streets & properties, all structures (and their heights) on your property, all emission points.   | OK |

MAIL REPORT TO:        SCAQMD  
                              ATTN.: TOXICS UNIT, ENGINEERING DIVISION  
                              9150 E. FLAIR DRIVE  
                              EL MONTE CA 91731

**Attachment 1**  
**Worst Case Emission Calculations**

PROJECT 1003-1

# HEWITT LANDFILL AB2588 EMISSION CALCULATIONS

01-Dec-91

FLOW AND CONCENTRATION DATA IS FROM THE APRIL 26, 1990 FLARE SOURCE TEST REPORT  
 AVE EXHAUST FLOW RATE = 12015.5 SCFM (REFERENCE APPENDIX A, PAGE 1  
 OF THE SOURCE TEST REPORT)

SUBSTANCE	FLARE ** EXHAUST CONCENTRATION PPB REF: TABLE 2-3 P6	CAS NUMBER	M.W.	Q EMISSIONS LBS/YEAR	APPLICABLE DEGREE OF ACCURACY APPENDIX A1 (LBS/YR)
1 BENZENE	<6.3	71-43-2	78.10	8.2	10
2 CHLOROBENZENE	<4.4	108-90-7	110.90	8.1	100
3 CHLOROFORM "TRICHLOROMETHANE"	<4.1	67-66-3	119.37	8.1	10
4 CARBON TETRACHLORIDE "TETRACHLORO METHANE"	<3.2	56-23-5	153.81	8.2	10
5 1,2 DICHLOROETHANE	<5.0	107-06-02	98.96	8.2	10
6 HYDROGEN SULFIDE (MEASURED AT THE FLARE INLET) *	21500	77-830-64	34.08	6.9	100
7 METHYLENE CHLORIDE "DICHLOROMETHANE"	<5.8	75-09-2	84.93	8.2	100
8 TETRACHLOROETHENE	<3.0	127-18-4	165.83	8.3	100
9 TRICHLOROETHYLENE	<3.7	79-01-6	131.38	8.1	100
10 1,1,1 TRICHLOROETHANE	<3.7	71-55-6	133.42	8.2	100
11 1,4 DICHLOROBENZENE	<3.3	106-46-7	147.00	8.1	100
12 TOLUENE	20	108-88-3	92.13	30.7	100
13 VINYL CHLORIDE	<7.9	75-01-4	62.50	8.2	100
14 TOTAL XYLENES	<6.6	1115	106.16	11.7	100
15 1,1 DICHLOROETHENE	<5.1	75-35-4	96.944	8.2	100

- \* EMISSIONS ARE BASED ON 99.5% DESTRUCTION EFFICIENCY AT 2. MMSCFD LANDFILL GAS FLOW RATE  
 \*\* EMISSION CALCULATIONS ARE BASED ON WORST CASE DATA. WHERE THE GAS CONCENTRATION IS LESS THAN  
 THE DETECTION LIMITS, THE DETECTION LIMIT IS USED IN THE CALCULATIONS.

FILE NAME "A:\HEWITT\AB2588"

**Attachment 2**  
**1990 Flare Source Test Report**

C01-001-FR

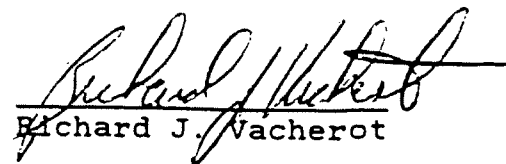
EMISSIONS FROM A  
LANDFILL GAS COLLECTION SYSTEM FLARE,  
HEWITT LANDFILL

Prepared for:

CAL MAT PROPERTIES COMPANY  
3200 San Fernando Road  
Los Angeles, CA 90065

Prepared by:

HORIZON AIR MEASUREMENT SERVICES  
996 Lawrence Drive #117  
Newbury Park, CA 91320

  
Richard J. Vacherot

May 29, 1990

Mr. George Cosby  
Cal Mat Properties Company  
3200 San Fernando Road  
Los Angeles, California 90065

Dear Mr. Cosby:

Please find enclosed two copies of the report entitled, "Emissions from a Landfill Gas Collection System Flare, Hewitt Landfill" documenting the emissions testing program conducted at the Hewitt Landfill Flare on April 26 and 27, 1990.

Sincerely,

HORIZON AIR MEASUREMENT SERVICES



Richard J. Vacherot

RV:lmg

Enclosure

## TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION	1
2. RESULTS	3
3. SAMPLING/ANALYTICAL PROTOCOLS	7
3.1 Sampling Location	7
3.1.1 Landfill Gas - Flare Inlet	7
3.1.2 Flare Outlet	8
3.2 Particulate Matter, Flow Rate, Moisture, Temperature	8
3.3 Sampling Procedures for Continuous Monitors - NO <sub>x</sub> , O <sub>2</sub> , CO and CO <sub>2</sub>	10
3.4 Methane/Total Non Methane Organics, Carbon Monoxide, and Carbon Dioxide - Flare Inlet	11
3.5 Methane and Total Non Methane Organics - Flare Outlet	12
3.6 Speciated Hydrocarbons, Hydrogen Sulfide (H <sub>2</sub> S) and C <sub>1</sub> - C <sub>3</sub> Sulfur Compounds	12
4. QUALITY CONTROL/QUALITY ASSURANCE	16
4.1 Equipment Calibration	16
4.2 Field Custody Procedures	17
4.3 Laboratory Custody Procedures	17
4.5 QA Objectives for Precision, Accuracy and Completeness	18
4.6 Data Validation	18
4.6.1 Field Data	18
4.6.2 Laboratory Data	19
4.7 Internal Quality Control Checks	19
APPENDIX A COMPUTER PRINTOUT OF RESULTS	
APPENDIX B LABORATORY DATA	
APPENDIX C FIELD DATA SHEETS	
APPENDIX D CALIBRATIONS	
APPENDIX E CHAIN-OF-CUSTODY RECORDS	

**HORIZON**

## 1. INTRODUCTION

Under Permit to Construct #164827 CAL MAT PROPERTIES COMPANY is required by the South Coast Air Quality Management District (SCAQMD) to conduct an emissions testing program on the landfill gas collection system flare located at the Hewitt Landfill, Los Angeles, California. HORIZON AIR MEASUREMENT SERVICES had been retained for this purpose. Field testing was conducted by Richard Vacherot, Robert Halk and Steve Mrazek of HORIZON. Continuous emission monitoring was conducted by Russ Logan of SCE.

The flare and landfill gas collection system description and specifications are provided in Table 1-1.

Results of the testing program are reported in Section 2 of this document. Sampling/Analytical procedures are provided in Section 3. Quality Control/Quality Assurance procedures utilized are provided in Section 4. All pertinent documentation is contained in the Appendices.

TABLE 1-1

Flare/Landfill Gas Collection System  
Description and Specifications  
Permit to Construct #164827

Legal Owners: CAL MAT PROPERTIES COMPANY  
3200 San Fernando Road  
Los Angeles, CA 90065  
Attn: R. Prosser

Equipment Location: 7245 Laurel Canyon  
Los Angeles, CA

Landfill Gas Collection System: Two landfill gas blowers B-1A and B-1B, Hauch, Model No. TBGB-9-071-271, each with a 25 Hp motor, venting forty-five (45) migration control wells.

Flare: John Zink, Model ZTOF, 8'-0" diameter x 24'-0" H, 20,000,000 Btu/hr.

Test Operating Conditions: Normal flare operating conditions - 1550° F.

## 2. RESULTS

The results of the criteria pollutant testing at the flare outlet are provided in Table 2-1. All emission rates were below the allowable limit.

Two test runs were performed for particulate matter. Upon preparation for analysis of particulate matter run #1, it was noticed that insulation material from the flare lining had inadvertently been collected in the sampling train impinger catch. Therefore, this test run was deemed unrepresentative and, although analyzed, the result from test run #1 is not reported in Table 2-1.

Results of the flare inlet and outlet testing using SCAQMD Method 25.1 and Method 25.2 TCA analyses, respectively, are reported in Table 2-2. Reported values are the average of duplicate samples. Duplicate total non methane hydrocarbon sample concentrations were within either 10% (inlet) or .5 ppm (outlet) of the reported average.

Speciated hydrocarbon and sulfur compound inlet and outlet concentrations are reported in Table 2-3.

TABLE 2-1  
Criteria Pollutant Emission Testing Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Concentration</u> (ppm,v/v)	<u>Emission Rate</u> (lb/hr)	<u>Allowable</u> (lb/hr)
Oxides of Nitrogen, as NO <sub>2</sub>	6.5	0.57	1.2
Carbon Monoxide, as CO	4.7	0.25	4.0
Reactive Organic Carbon, as CH <sub>4</sub>	1.16	0.035	2.0
Particulate Matter	0.013(gr/dscf)	1.3 <sup>a</sup>	3.6

a Based on Run #2 results. Run #1 was invalidated due to the inadvertent collection of flare insulation material in the sample train. Run #1 resulted in an emission rate of 3.55 lb/hr.

TABLE 2-2  
Total Combustion Analyses Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Inlet<sup>1</sup></u> (ppm, v/v)	<u>Outlet<sup>1</sup></u> ppm (v/v)	<u>lb/hr</u>
Total Non Methane Hydrocarbons	1,724	1.16	0.035
Methane	201,000	2.79	NA
Carbon Monoxide	100.8	NQ	NA
Carbon Dioxide	205,500	NQ	NA

1 All reported values are the average of duplicate samples.

NQ - Not Quantified

NA - Not Applicable

TABLE 2-3  
Speciated Hydrocarbon and Sulfur Compound Results  
Hewitt Landfill Flare, North Hollywood  
April 26, 1990

	<u>Inlet<sup>1</sup></u> (ppb, v/v)	<u>Outlet<sup>1</sup></u> (ppb, v/v)
Hydrogen sulfide	21,500	NQ
C1-C3 sulfur compounds <sup>2</sup>	<400	NQ
Vinyl chloride	570	<7.9
1,1-dichloroethane	<51	<5.1
Methylene chloride	<58	<5.8
Chloroform	<41	<4.1
1,2 dichloroethane	<50	<5.0
1,1,1-trichloroethane	<37	<3.7
Benzene	2,800	<6.3
Carbon tetrachloride	<32	<3.2
Trichloroethene	.250	<3.7
Toluene	4,900	20
Tetrachloroethane	335	<3.0
Chlorobenzene	490	<4.4
Total xylenes	7,350	6.6
1,4 dichlorobenzene	450	<3.3

1. Reported values are the average of duplicate analyses. Concentrations preceded by "<" are below the detection limit reported.
2. Includes methylmercaptan, ethylmercaptan, propyl mercaptan, dimethyl sulfide and CS<sub>2</sub>.

NQ - Not quantified.

### 3. SAMPLING/ANALYTICAL PROTOCOLS

The parameters of interest and associated sampling/analytical methodology utilized, as required by Permit Condition #18, are outlined below:

<u>Parameter</u>	<u>Test Method</u>
Methane/Total Non Methane Organics	SCAQMD Method 25.1
Oxides of Nitrogen (Exhaust Only)	SCAQMD Method 100
Carbon Monoxide (Exhaust Only)	SCAQMD Method 100
Particulates (Exhaust Only)	SCAQMD Method 5.1
Hydrogen Sulfide (Inlet Only)	Whole Air/GC-Hall detection
C <sub>1</sub> - C <sub>3</sub> Sulfur Compounds (Inlet Only)	Whole Air/GC-Hall detection
Speciated Hydrocarbons	Whole Air/GC-MS
Carbon Dioxide	SCAQMD Method 100/25.1
Oxygen	SCAQMD Method 100
Nitrogen (Exhaust Only)	SCAQMD Method 100
Moisture Content (Exhaust Only)	SCAQMD Method 5.1
Flow Rate (Exhaust Only)	SCAQMD Method 5.1
Temperature (Exhaust Only)	SCAQMD Method 5.1

One, one-hour test run for each parameter was conducted simultaneously at the specified locations with the exception of particulate matter. Two, three-hour particulate test runs were conducted. The sampling locations and specific sampling/analytical procedures utilized are detailed in subsequent portions of this Section.

#### 3.1 Sampling Location

##### 3.1.1 Landfill Gas - Flare Inlet

Flare inlet samples were collected from a 3/4" NPT sample port installed in the landfill gas header between the blowers and the flare.

### 3.1.2 Flare Outlet

Flare outlet samples were collected from a location five feet downstream from the top of the flare stack and 19 feet above the flare stack base.

### 3.2 Particulate Matter, Flow Rate, Moisture, Temperature

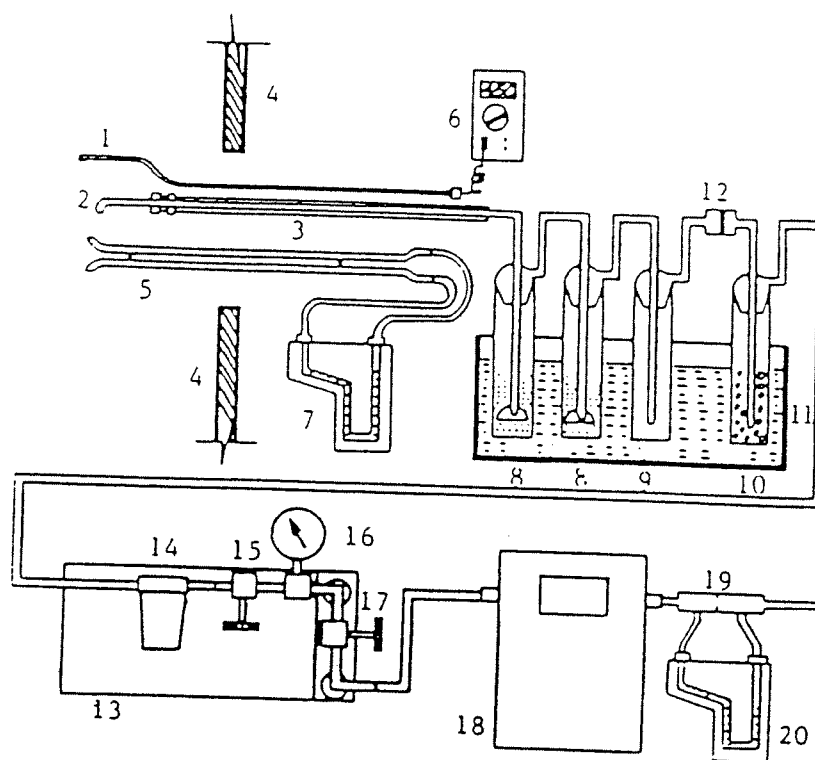
HORIZON conducted two test runs for particulate matter in accordance with SCAQMD Method 5.1 protocol.

Twelve points per each of two traverses were utilized for the collection of particulate matter. A check for cyclonic flow was conducted at the sample locations concurrent with the preliminary velocity traverse as specified in the method. Samples were withdrawn isokinetically from each of the determined traverse points.

HORIZON used a sampling train which conforms to Method 5.1 specifications as depicted in Figure 3-1. Stack gases were withdrawn through a Hastalloy C buttonhook nozzle and a Hastalloy C unheated probe followed by 3/8" OD Teflon tubing and a series of four impingers. A thermocouple and pitot tube were connected to the probe per Method 5.

The third and fourth impinger was of the modified Greenburgh-Smith design, and the first and second was a standard type. The first and second impinger contained 100 ml of DI H<sub>2</sub>O. The third impinger was empty. The last contained a preweighed amount of silica gel. An umbilical cord connected the last impinger to the flow control console containing a leakless, lubricated vane pump, dry gas meter, calibrated orifice, and a dual 0-0.25 inch H<sub>2</sub>O magnahelic.

A leak check of the pitot tube lines and sampling trains was conducted prior to and after each sampling run and prior to and after either changing any of the constituents of the train or



- |  |   |
|--|---|
| 1. Temperature Sensor                    | 11. Ice Bath                              |
| 2. Nozzle                                | 12. Filter                                |
| 3. Glass Lined Stainless Steel Probe     | 13. Sealed Pump (Leak Free)               |
| 4. S-type Pitot Tube                     | 14. Filter for Pump                       |
| 5. Stack Wall                            | 15. Metering Valve                        |
| 6. Temperature Sensor Meter              | 16. Vacuum Gauge                          |
| 7. Pitot Tube Inclined Manometer         | 17. By-pass Valve                         |
| 8. Impinger with 100 ml H <sub>2</sub> O | 18. Temperature Compensated Dry Gas Meter |
| 9. Empty Bubbler                         | 19. Orifice                               |
| 10. Bubbler with Silica Gel              | 20. Orifice Inclined Manometer            |

Figure 3-1

Particulate Sampling Train Setup-Wet Impingement Method

disconnecting umbilical cords to facilitate transport of the trains.

Upon completion of each sampling run, the nozzle was removed. The nozzle, probe and connective tubing was brushed and rinsed with distilled water. The filter was replaced in its original container pending analyses. The impingers and all connecting glassware was collected and rinsed with DI water.

All sample bottles and filter containers were sealed with chain-of-custody tape and all liquid levels marked.

Analyses was conducted on the probe and impinger catch fraction and filter fraction in accordance with SCAQMD Method 5.1.

### 3.3 Sampling Procedures for Continuous Monitors - NO<sub>x</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>

One 60-minute test run was conducted at the flare outlet for NO<sub>x</sub>, CO, CO<sub>2</sub> and O<sub>2</sub> using SCAQMD Method 100.1 continuous monitoring procedures. Sample was extracted through a stainless steel probe followed by a Teflon sample line using a Teflon-lined diaphragm pump. Prior to the pump, the sample gas is passed through a glass water "drop out" container followed by a 47 mm glass fiber filter contained within a stainless steel holder. The clean, dry sample gas is then transported to the continuous analyzer system through an unheated 5/8" OD Teflon line. A series of flowmeters, valves, and regulators maintain flow through the system at a constant pressure.

Calibration of the continuous analyzers are performed using certified calibrations gases ( $\pm 1\%$ ) for criteria pollutant analysis and for fixed gas analysis. All pertinent data (date, time, test locations, analyzer range, cal gas value) are recorded on both the field data sheets and the continuous analyzer strip charts in the field.

At the start of the test day, a leak-check is performed. The sample probe is removed from the stack and the end is sealed with

a Swagelok cap. A leak-check is successfully only if pressure at the analyzer system and flow through the rotometers to the individual analyzers all drop to zero. A mandatory leak-check is performed at completion of each test day.

An external calibration (sampling system bias check) of the monitoring system is performed at the beginning and end of each test day by introducing a calibration gas at the tip of the probe. The value measured by the system must agree within  $\pm 5\%$  of the certified gas value before testing can proceed.

An internal calibration is performed at the start of each test period by introducing zero and the span gas to each analyzer and making the necessary adjustments. Calibration gas values are recorded onto the continuous monitor strip charts and the field data sheets. A calibration check is completed at the end of each test run.

#### 3.4 Methane/Total Non Methane Organics, Carbon Monoxide, and Carbon Dioxide - Flare Inlet

Methane, total non methane organics, carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) samples was collected by HORIZON AIR MEASUREMENT SERVICES using the SCAQMD Method 25.1 procedures at the flare inlet.

Duplicate gas samples are withdrawn from a source at a constant rate through condensate traps immersed in dry ice followed by evacuated, 12-liter (nominal) tanks. Heavy organic components condense as liquids and solids in the condensate traps. Lighter components pass as gases through the traps into the tanks. Volatile organic compounds (VOC) as total gaseous non-methane organics (TGNMO) are determined by combining results from independent analyses of condensate in the traps and gases in the tanks. These results are used to determine a qualitative and quantitative expression of the effluent source gas stream. Duplicate sampling is designed into the system to ensure precision.

After sampling is completed, condensate traps are analyzed by first stripping carbon dioxide ( $\text{CO}_2$ ) from the trap. The organic contents are then removed and oxidized to  $\text{CO}_2$ . This  $\text{CO}_2$  is quantitatively collected in an evacuated vessel and measured by injection into the flame ionization detection/total combustion analysis (FID/TCA) system.

The organic content of the sample fraction collected in each tank is measured by injecting a portion into the FID/TCA analysis system which uses a two phase gas chromatography (GC) column to separate carbon monoxide ( $\text{CO}$ ), methane ( $\text{CH}_4$ ), and carbon dioxide ( $\text{CO}_2$ ) from each other and from the total gaseous non-methane organics (TGNMO) which are eluted as backflush. All eluted components are first oxidized to  $\text{CO}_2$  by a hopcalite catalyst and then reduced to methane by a nickel catalyst. The resulting methane is detected using the flame ionization detector.

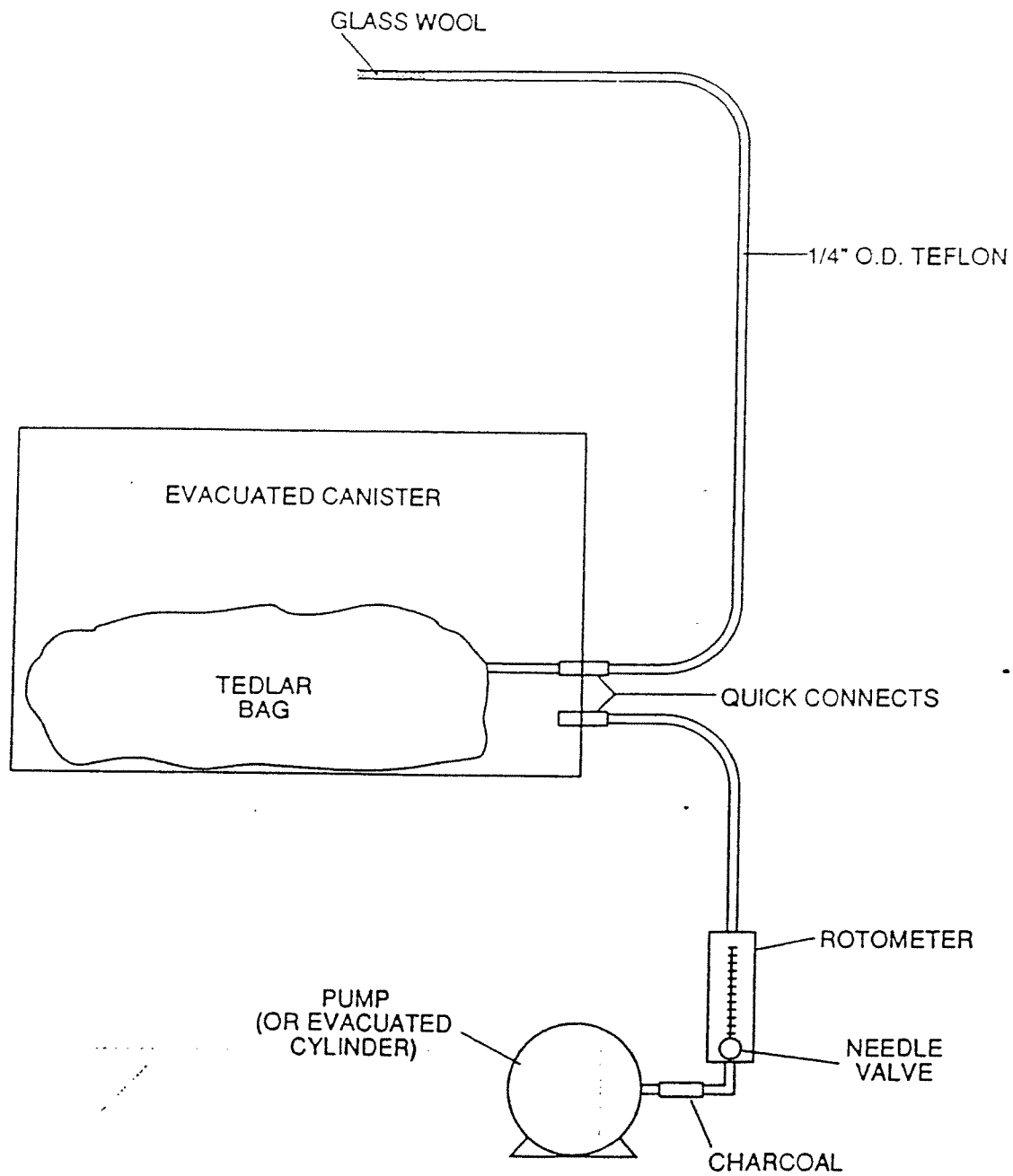
A gas standard containing  $\text{CO}$ ,  $\text{CH}_4$ ,  $\text{CO}_2$ , and propane, prepared by Scott Speciality Gases is traceable to NBS and is used to calibrate the FID/TCA analysis system.

### 3.5 Methane and Total Non Methane Organics - Flare Outlet

Methane and total non methane organics were collected at the flare outlet using SCAQMD Method 25.2 using the sampling procedure described in Section 3.6. Duplicate bag samples were analyzed using Micro - TCA procedures.

### 3.6 Speciated Hydrocarbons, Hydrogen Sulfide ( $\text{H}_2\text{S}$ ), and $\text{C}_1 - \text{C}_3$ Sulfur Compounds

Speciated hydrocarbon samples were collected at the inlet and outlet of the flare using the Tedlar bag collection system pictured in Figure 3-2. Hydrogen sulfide ( $\text{H}_2\text{S}$ ) and  $\text{C}_1 - \text{C}_3$  sulfur compounds were collected at the flare inlet only using identical procedures



TEDLAR BAG - EVACUATED CANISTER  
SAMPLING SYSTEM

FIGURE  
3-2

as speciated hydrocarbons. One, 60-minute sample was collected simultaneously at the flare inlet and outlet.

The evacuated canister sampling system is capable of collecting an integrated, representative sample while ensuring sample integrity. The system consists of a 1/4" O.D. Teflon probe/sample line, containing glass wool to remove particulate, and a 10-liter leak-free, non-reactive Tedlar bag contained within an leak-free evacuation drum. All system components coming in contact with sample are constructed of Teflon, glass, or stainless steel.

Sample was collected by evacuating the canister at a constant rate over each test run using a rotometer/needle valve and a second 12-liter stainless steel cylinder evacuated to 30 inches of vacuum.

Prior to each sampling run, the evacuated canister (containing the Tedlar bag) was leak checked at 2" Hg vacuum. The sample train upstream of the Tedlar bag was then be purged with stack gas.

At the conclusion of each test run, each Tedlar bag sample was sealed and stored in an opaque container pending analysis.

All samples were analyzed within 48 hours of collection.

Speciated hydrocarbons were identified by GC/MS with the Table 3-1 list quantified. Hydrogen sulfide and C<sub>1</sub> - C<sub>9</sub> sulfur compounds were analyzed using Hall electrolytic conductivity detection.

TABLE 3-1

Speciated Hydrocarbons Quantification List

1. Benzene
2. Chlorobenzene
3. Dichlorobenzene
4. 1,2 Dichloroethane (Ethylene Dichloride)
5. 1,1 Dichloroethene (Vinylidene Chloride)
6. Tetrachloroethylene (Perchloroethylene)
7. Tetrachloromethane (Carbon Tetrachloride)
8. Toluene
9. 1,1,1 Trichloroethane (Methyl Chloroform)
10. Trichloroethylene
11. Trichloromethane (Chloroform)
12. Vinyl Chloride
13. Xylene
14. Methylene Chloride

#### 4. QUALITY CONTROL/QUALITY ASSURANCE

A strict quality assurance program was adhered to throughout the source sampling and analytical phases of the program.

The quality assurance program entails the calibration of all sampling and analytical apparatus where applicable and the use of control samples and replicate analyses where feasible.

##### 4.1 Equipment Calibration

The sampling equipment was calibrated at HORIZON's office before transport and recalibrated upon return. The sampling equipment was calibrated according to the EPA procedures specified in APTD-0576 and 40 CRF 60, Appendix A, and manufacturer's specifications. Calibration sheets were available prior to the initiation of the sampling program. Calibration procedures include:

- o Dry Gas Meter and Orifice Meter Method 5. The dry gas meters for all sampling trains were calibrated against a GCA/Precision wet test meter or a dry gas meter which has been calibrated against a spirometer. The orifice meters in the particulate trains were checked against the dry gas meter to which it is attached.
- o Sampling Nozzle. Each nozzle was measured with a micrometer prior to testing. The internal diameter of each sampling nozzle is measured to 0.001 inches along three points of the circumference with a dial vernier caliper. The three measurements were then averaged.
- o Balance. The analytical balance was calibrated against Class M weights by the Mettler Corporation. It is checked daily against Class S weights.
- o Thermocouples. The K-type thermocouples in the meter control box, heated sample box, impinger umbilical connector and the one attached to the probe are calibrated against ASTM mercury in glass thermometers at two points. The first point is in an ice bath and the second at the boiling point of water.
- o Pitot Tube. The "S" type Pitot tubes were designed to meet geometric configurations as defined in Method 2.

#### 4.2 Field Custody Procedures

In addition to identification labels or tags, chain of custody seals were used on samples collected by field personnel. These self-sticking seals were placed across the sample container cover/lid in such a way that the container cannot be opened without breaking the seal. The condition of the seal was noted in the Sample Bank Master Log to document whether any tampering had occurred after the sample was collected.

The chain of custody of a sample was initiated and maintained as follows:

- o A sample was collected, labeled, and sealed on appropriate samples.
- o The sample was recorded on the chain-of-custody record (COC).
- o All samples were accounted for, packed, and returned to the laboratory.

#### 4.3 Laboratory Custody Procedures

Upon return to the laboratory the samples and the COC record was turned over to the Sample Bank Manager (SBM) who:

- o Logged the sample into a large bound Master Log.
- o Noted the condition and the container type.
- o Assigned and affixed a Control Number to the sample container.
- o Initiated a page for each sample in the Custody Book and made sure that handling of the sample was documented.
- o After necessary preservation and/or subdivision, stored the samples in the refrigerated or non refrigerated section of the Sample Bank as appropriate.

All withdrawals from and returns to the Sample Bank were initiated by entry in the SAMPLE BANK TRANSACTION LOG BOOK.

#### 4.5 QA Objectives for Precision, Accuracy and Completeness

The collection of data that was used to successfully accomplish the goals outlined in this report required that the sampling and analytical procedures be conducted with properly operated and calibrated equipment by trained, experience personnel.

It is recognized that the usefulness of the data is contingent upon meeting criteria for representatives and comparability. Every effort was made to assure representatives by adhering strictly to the sampling and analytical protocols outlined. The QA objective is that all measurements be representative of the streams sampled and of the process being tested.

#### 4.6 Data Validation

Data validation is the process of filtering data and accepting or rejecting it on the basis of sound criteria. HORIZON supervisory and QC personnel used validation methods and criteria appropriate to the type of data and the purpose of the measurement. Records of all data were maintained, even that judged to be an "outlying" or spurious value. The persons validating the data have sufficient knowledge of the technical work to identify questionable values.

##### 4.6.1 Field Data

The following criteria was used to evaluate sampling data:

- o Use of approved test procedures.
- o Steady-state operation of the process being tested.
- o Use of properly operating and calibrated equipment.

- o Use of reagents that have passed QC checks.
- o Leak checks conducted before and after tests.
- o Proper chain of custody maintained.

#### 4.6.2 Laboratory Data

The following criteria was used to validate laboratory data:

- o Use of approved analytical procedure.
- o Use of properly operating and calibrated instrumentation.
- o Precision and accuracy achieved comparable to that achieved in similar analytical programs.

#### 4.7 Internal Quality Control Checks

Quality Control checks were performed to ensure the collection of representative samples by using the proper sampling techniques and the generation of valid analytical results on these samples. These checks were performed by project participants throughout the program under the guidance of the QA Task Manager and the Project Manager. HORIZON'S QC program from the sampling aspects of this program included the following:

- o Equipment Calibration - All sampling equipment (dry gas meters, pitot tubes, thermocouples, etc.) were calibrated as previously described in this QA Plan.
- o Use of Designated Sampling Forms - Sample data forms were developed for all methods and were completed by personnel collecting the sample to ensure that all pertinent information was recorded.

HORIZON quality control program for laboratory analysis made use of a number of different types of QC samples to document the validity of the generated data. The following types of QC samples were used routinely:

- o Blank Samples

1. Field-Biased Blanks - Blank samples which have been exposed to field and sampling conditions in order to assess possible contamination from the field.
2. Method Blanks - Blanks which are processed through the sample preparation procedures to account for contamination introduced in the laboratory. One method blank is prepared with each batch of 20 or fewer samples processed.
3. Calibration Blanks - Blanks used in instrument calibration; these blanks contain the reagents used in preparing instrument calibration standards except the parameters of interest.

- o Duplicate Samples - A second aliquot of some samples was carried through all sample preparation and analysis procedures to verify the precision of the analytical method.

The duplicate and spiked samples or reference materials were also submitted as "blind" QC samples, those which are not recognizable to the analyst.

- o Instrument QC Checks and Frequency

- daily calibration
- analyze a calibration check sample after every 10 samples; reported value must be within established control limits.

- o Preparation and Analysis Procedure QC Checks and Frequency

- method blank with each group of 20 or fewer samples
- laboratory control sample and duplicate with each group of 20 or fewer samples

Reagents used in the laboratory are normally of analytical grade or higher purity; each lot of acid or solvent used was checked for acceptability prior to lab use.

## APPENDIX A

Computer Printout of Results

# CALMAT

LANDFILL FLARE  
PLANT: HEWITT LANDFILL  
LOCATION: NORTH HOLLYWOOD

		RUN 1	RUN 2
RUN NUMBER	*****	1	2
DATE OF RUN	*****	4-26-90	4-27-90
CLOCK TIME: INITIAL	*****	1350	810
CLOCK TIME: FINAL	*****	1700	1126
AVG. STACK TEMPERATURE	DEGREES F	1251	1339
AVG. SQUARE DELTA P	INCHES H2O	0.1463	0.1424
NOZZLE DIAMETER	INCHES	0.365	0.365
BAROMETRIC PRESSURE	IN. HG.	30.02	30.03
SAMPLING TIME	MIN.	180	192
SAMPLE VOLUME	CUBIC FEET	30.200	30.688
AVG. METER TEMP.	DEGREES F	92	83
AVG. DELTA H	IN. H2O	0.09	0.09
DGM CALIB. FACTOR [Y]	*****	1.01	1.01
WATER COLLECTED	MILLILITERS	61	53
CO 2	PERCENT	12.0	12.0
O 2	PERCENT	11.3	11.0
CO	PERCENT	0.0	0.0
N 2	PERCENT	76.7	77.0
STACK AREA	SQUARE INCHES	7238	7238 - 96"
STATIC PRESSURE	INCHES WG.	-0.05	0.20
PITOT COEFFICIENT	*****	0.84	0.84
SAMPLE VOLUME DRY	DSCF	28.836	29.797
WATER AT STD.	SCF	2.9	2.5
MOISTURE	PERCENT	9.1	7.7
MOLE FRACTION DRY GAS	*****	0.909	0.923
MOLECULAR WT. DRY	LB/LB MOLE	30.37	30.36
EXCESS AIR	PERCENT	126.27	117.92
MOLECULAR WT. WET	LB/LB MOLE	29.24	29.41
STACK GAS PRESSURE	INCHES HG.	30.02	30.04
STACK VELOCITY	AFPM	879	875
VOLUMETRIC FLOWRATE, DRY STD.	DSCFM	12246	11785
VOLUMETRIC FLOWRATE, ACTUAL	ACFM	44192	43974
ISOKINETIC RATIO	PERCENT	90	91

## CALCULATIONS FOR GRAIN LOADING AND EMISSION RATES

TOTAL PARTICULATE	mg	63.3	25.1
PARTICULATE CONCENTRATION	gr/dscf	0.034	0.013
PARTICULATE EMISSION RATE	lb/hr	3.55	1.31

# HORIZON

Date: 4/26/90

Page 1 of 1

Emissions Data - S.C.A.Q.M.D. Method 100.1

Client : Calmat  
Site : Hewlitt Landfill

Unit : Flare  
Run # : 1

Times : Beg.Cal@ 1600 Start@ 1610 Stop@ 1710 End Cal@ 1710

\*\* MEASURED EMISSIONS COMPONENTS \*\*

Source :	Out	Out	Out	Out
Component:	NOx	O2	CO	CO2
Units :	ppm	%	ppm	%

\*\* INSTRUMENT CAL RANGE, SPAN & DATA RANGE \*\*

C. Range :	100	25	100	25
Span :	84.0	10.0	68.8	10.0
D. Range :	100	25	100	25

\*\* RAW EMISSIONS DATA \*\*

1610	7	9.8	15	9.5
5	6	10.5	5	10.0
10	7	10.2	0	10.0
15	6	10.4	16	10.0
20	6	10.2	0	11.5
25	6	10.0	0	10.5
30	7	10.2	6	9.5
35	7	10.5	0	9.7
40	5	10.2	4	10.0
45	6	10.0	6	10.0
50	6	10.2	6	10.0
55	7	10.7	1	10.2
60	8	10.5	2	10.0
Raw Avg. :	6	10.3	5	10.1
Maximum :	8	10.7	16	11.5
Minimum :	5	9.8	0	9.5

\*\* CALIBRATION ADJUSTMENTS \*\*

Zero :	1.0	0.0	1	0.0
Span :	-3.0	0.0	0	0.0

\*\* DRIFT CORRECTED EMISSIONS \*\*

Average :	7	10.3	5	10.1
-----------	---	------	---	------

\*\* NOTES \*\*

HORIZON

EMISSION RATES - TNMHC

PLANT: HEWITT LANDFILL FLARE EXHAUST

LOCATION: N. HOLLYWOOD

TEST PROGRAM PARTICIPANTS: R. VACHEROT, S. MRAZEK, R. HALK

SAMPLE LOCATION: FLARE EXHAUST

CONTAMINANT: VOC, CH4 16.00

RUN #		OUTLET	OUTLET
DATE		1A	1B
		4-26-90	4-26-90
SAMPLE VOLUME	standard liters		
CONTAMINANT MASS	ug		
CONCENTRATION	ug/liter	0.8566	0.6539
CONCENTRATION	ppm,v/v	1.31	1.00
VOLUMETRIC FLOWRATE	dscfm	12246	12246
EMISSION RATE	grams/second	4.95E-03	3.78E-03
EMISSION RATE	lbs/hour	3.92E-02	2.99E-02

HORIZON

CLIENT:	CALMAT
JOB NUMBER:	C01-001
SOURCE :	FLARE
FACILITY:	HEWITT LANDFILL
LOCATION:	N. HOLLYWOOD
TEST DATE:	4-26-90

Parameter	Units	Inlet	Inlet
Tank #		F	G
Trap #		F	G
Sample Tank Vol.	liters	12.460	12.460
Initial Pressure	mm Hg	4.5	4.5
Initial Temperature	K	289	289
Final Pressure	mm Hg	240	225
Final Temperature	K	289	289
Sample Volume	liters	3.92	3.67
Analysis Pressure	mm Hg	800	800
Analysis Temperature	K	289	289
Methane in Tank	ppm	198000	204000
TNMHC, Tank(noncond.)	ppm	863	812
ICV Volume	liters	2.266	2.266
ICV Final Pressure	mm Hg	800	800
ICV Final Temp.	K	289	289
CO2 in ICV	ppm	1740	1240
TNMHC, Trap(cond.)	ppm	1007	766
Stack Total TNMHC	ppm	1870	1578
Stack Total TNMHC	mg CH4/dscm	1225.8	1034.7

---

# HORIZON

APPENDIX B  
Laboratory Data



# Atmosphere Assessment Associates

21354 Nordhoff St., Suite 113, Chatsworth, CA 91311 (818) 718-6070

environmental consulting  
laboratory services

## LABORATORY ANALYSIS REPORT

### CO, CH<sub>4</sub>, CO<sub>2</sub>, & Total Gaseous Non-Methane Organics (TGNMO) Analysis in Tanks and Traps by SCAQMD Method 25 (FID/TCA)

Report Date: April 30, 1990  
P.O. No.: Verbal  
Client: Horizon  
Source Location: Hewitt Landfill  
Source Test Date: April 26, 1990  
Source ID: CALMAT

Date Received: April 26, 1990  
Date Analyzed: April 27, 1990

### FID/TCA Analysis - SCAQMD Method 25

Laboratory No.:	91160-6	91160-7
Sample ID. No.:	Tank F	Tank G

#### Tank Contents:

Final Pressure	800	800
Initial Pressure	240	225


#### Component Conc.:

(ppm, v/v)

CO	99.5	102
CH <sub>4</sub>	198000	204000
CO <sub>2</sub>	203000	208000
TGNMO	863	812

Trap No.:	F	G
Transfer Tank No.:	ICV-12	ICV-9
Conc. of CO <sub>2</sub> in Transfer Tank (ppm, v/v)	1740	1240
Transfer Tank Vol.:	2.2	2.2

NOTE: Tank pressure is in mm Hg.  
TGNMO is total gaseous non-methane organics as ppm methane.  
Transfer tank volume is in liters.

  
Michael L. Porter  
Laboratory Director



# Atmosphere Assessment Associates

21354 Nordhoff St., Suite 113, Chatsworth, CA 91311 (818) 718-6070

environmental consultants  
laboratory services

## LABORATORY ANALYSIS REPORT

Methane, TGNMO &  
C<sub>1</sub>-C<sub>3</sub> Sulfur Compounds  
in Tedlar Bag Samples

Project No.: C01-001  
Site : Hewitt Landfill  
Source Test Date: April 26, 1990  
Date Received: April 27, 1990  
Date Analyzed: April 27, 1990

Methane and TGNMO are analyzed by flame ionization detection/total combustion analysis (FID/TCA), SCAQMD Method 25, analysis portion and C<sub>1</sub>-C<sub>3</sub> sulfur compounds are analyzed by Electron Capture Detection/gas chromatograph (ECD/GC).

AAA Lab No.:	91160-3	91160-4
Sample ID No.:	CM-O-1B	CM-O-1A
	4/26/90	4/26/90

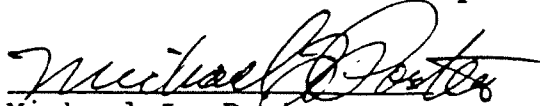
<u>Component</u>	(Concentration in ppm,v/v)	
Methane	4.58	<1
TGNMO	1.31	<1

-----

AAA Lab No.:	91160-5
Sample ID No.:	HL-I-S
	4/26/90

<u>Component</u>	(Concentration in ppm,v/v)
Hydrogen Sulfide	21.5
C <sub>1</sub> -C <sub>3</sub> Sulfur- compounds	ND

Note: ND= not detected with the lower limit of <0.4 ppm for each of the C<sub>1</sub>-C<sub>3</sub> sulfur compounds are for methylmercaptan, ethylmercaptan, propylmercaptan, dimethyl sulfide, and CS<sub>2</sub>.

  
Michael L. Porter  
Laboratory Director

QUALITY ASSURANCE SUMMARY  
(Duplicates Analyses)

P.O. No.: Verbal  
 AAA Project No.: 353  
 Horizon Project No.: CO1-001  
 Site : Hewitt Landfill

TCA Samples

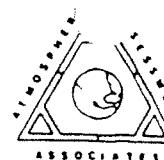
Date Received: April 26, 1990  
 Date Analyzed: April 27, 1990

<u>Component</u>	<u>Sample ID</u>	<u>Duplicates Analyses</u>		<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
		<u>Run #1</u>	<u>Run #2</u>		
		(concentration in ppm, v/v)			
CO	TK-F	99.8	99.2	99.5	0.30
CH <sub>4</sub>	TK-F	198000	198000	198000	0.0
CO <sub>2</sub>	TK-F	204000	202000	203000	0.49
TGNMO	TK-G	768	856	812	5.4
CO <sub>2</sub> (in trap, transfer tanks)	ICV-9 (TK G)	1230	1260	1240	1.2

TGNMO is total gaseous non-methane organics reported as ppm methane.

A set of 2 TCA samples, laboratory numbers 91160-(6-7) was analyzed for CO, methane, carbon dioxide, and TGNMO. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicates analyses are an important part of Atmosphere Assessment Associates' quality assurance program. The average % Difference from Mean for 5 duplicate measurements from the sample set of 2 samples is 1.5%.

Gas standards (containing CO, methane, carbon dioxide, and propane) used for TCA analyses, were prepared and certified by Scott Specialty Gases.



QUALITY ASSURANCE SUMMARY  
(Duplicates Analyses)

P.O. No.: Verbal  
 AAA Project No.: 353  
 Horizon Project No.: C01-001  
 Site : Hewitt Landfill

Tedlar Bag Samples

Date Received: April 26, 1990  
 Date Analyzed: April 27, 1990

<u>Component</u>	<u>Sample ID</u>	<u>Duplicates Analyses</u>		<u>Mean Conc.</u>	<u>% Diff. from Mean</u>
		<u>Run #1</u>	<u>Run #2</u>		
		(concentration in ppm, v/v)			
CH <sub>4</sub>	CM-O-1A	<1	<1	---	---
TGNMO	CM-O-1A	<1	<1	---	---
H <sub>2</sub> S	HL-I-S	21.4	21.6	21.5	0.46
C <sub>1</sub> -C <sub>3</sub> Sulfur compounds	HL-I-S	<0.4	<0.4	---	---

TGNMO is total gaseous non-methane organics reported as ppm methane.

A set of 3 Tedlar bag samples, laboratory numbers 91160-(3-5) was analyzed for methane, TGNMO, hydrogen sulfide, and C<sub>1</sub>-C<sub>3</sub> Sulfur compounds. Agreement between duplicate analyses is a measure of precision and is shown above in the column "% Difference from Mean". Duplicates analyses are an important part of Atmosphere Assessment Associates' quality assurance program. The average % Difference from Mean for one duplicate measurement from the sample set of 3 samples is 0.46%.

Gas standards (containing CO, methane, carbon dioxide, and propane) used for TCA analyses, were prepared and certified by Scott Specialty Gases.





Performance Analytical Inc.  
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services

Client Sample ID: CM-O-1A-GC/MS

PAI Sample ID: 9001641

Test Code: GC/MS EPA TO-14  
Analyst: Michael Tuday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 1.0 Liters

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	ND	20	ND	7.9
75-35-4	1,1-DICHLOROETHENE	ND	20	ND	5.1
75-09-2	METHYLENE CHLORIDE	TR 18	20	TR 5.2	5.8
67-66-3	CHLOROFORM	ND	20	ND	4.1
107-06-2	1,2-DICHLOROETHANE	ND	20	ND	5.0
71-55-6	1,1,1-TRICHLOROETHANE	ND	20	ND	3.7
71-43-2	BENZENE	ND	20	ND	6.3
56-23-5	CARBON TETRACHLORIDE	ND	20	ND	3.2
79-01-6	TRICHLOROETHENE	ND	20	ND	3.7
108-80-5	TOLUENE	70	20	19	5.3
127-18-4	TETRACHLOROETHENE	TR 3.1	20	TR 0.5	3.0
108-90-7	CHLOROBENZENE	ND	20	ND	4.4
1330-20-7	TOTAL XYLENES	28	20	6.5	4.6
106-46-7	1,4-DICHLOROBENZENE	ND	20	ND	3.3

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit



Performance Analytical Inc.  
Environmental Testing and Analysis

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services

Client Sample ID: CM-1-GC/MS

PAI Sample ID: 9001640

Test Code: GC/MS EPA TO-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 100 mL

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	1300	200	510	79
75-35-4	1,1-DICHLOROETHENE	ND	200	ND	51
75-09-2	METHYLENE CHLORIDE	ND	200	ND	58
67-66-3	CHLOROFORM	TR 48	200	TR 9.9	41
107-06-2	1,2-DICHLOROETHANE	ND	200	ND	50
71-55-6	1,1,1-TRICHLOROETHANE	ND	200	ND	37
71-43-2	BENZENE	8400	200	2600	63
56-23-5	CARBON TETRACHLORIDE	ND	200	ND	32
79-01-6	TRICHLOROETHENE	1300	200	240	37
108-80-5	TOLUENE	18000	200	4800	53
127-18-4	TETRACHLOROETHENE	2200	200	330	30
108-90-7	CHLOROBENZENE	2100	200	460	44
1330-20-7	TOTAL XYLENES	30000	200	6900	46
106-46-7	1,4-DICHLOROBENZENE	2500	200	420	33

ND = Not Detected

TR = Trace Level; Below Indicated Detection Limit



Performance Analytical Inc.  
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services

Client Sample ID: CM-I-GC/MS LABORATORY DUPLICATE

PAI Sample ID: 9001640D

Test Code: GC/MS EPA T0-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 100 mL

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	1600	200	630	79
75-35-4	1,1-DICHLOROETHENE	ND	200	ND	51
75-09-2	METHYLENE CHLORIDE	ND	200	ND	58
67-66-3	CHLOROFORM	TR 57	200	TR 12	41
107-06-2	1,2-DICHLOROETHANE	ND	200	ND	50
71-55-6	1,1,1-TRICHLOROETHANE	ND	200	ND	37
71-43-2	BENZENE	9500	200	3000	63
56-23-5	CARBON TETRACHLORIDE	ND	200	ND	32
79-01-6	TRICHLOROETHENE	1400	200	260	37
108-80-5	TOLUENE	19000	200	5000	53
127-18-4	TETRACHLOROETHENE	2300	200	340	30
108-90-7	CHLOROBENZENE	2400	200	520	44
1330-20-7	TOTAL XYLENES	34000	200	7800	46
106-46-7	1,4-DICHLOROBENZENE	2900	200	480	33

ND - Not Detected

TR - Trace Level; Below Indicated Detection Limit



Performance Analytical Inc.  
Environmental Testing and Compliance

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Horizon Air Measurement Services  
Client Sample ID: CM-O-1A-GC/MS LABORATORY DUPLICATE  
PAI Sample ID: 9001641D

Test Code: GC/MS EPA TO-14  
Analyst: Michael Taday  
Instrument ID: Finnigan 4500A/Tekmar 5010  
Verified by: Chris Casteel

Matrix: Tedlar Bag  
Date Received: 04/27/90  
Date Analyzed: 04/27/90  
Volume Analyzed: 1.0 Liters

CAS #	COMPOUND	RESULT (UG/M3)	DETECTION LIMIT (UG/M3)	RESULT (PPB)	DETECTION LIMIT (PPB)
75-01-4	VINYL CHLORIDE	ND	20	ND	7.9
75-35-4	1,1-DICHLOROETHENE	ND	20	ND	5.1
75-09-2	METHYLENE CHLORIDE	20	20	5.8	5.8
67-66-3	CHLOROFORM	ND	20	ND	4.1
107-06-2	1,2-DICHLOROETHANE	ND	20	ND	5.0
71-55-6	1,1,1-TRICHLOROETHANE	ND	20	ND	3.7
71-43-2	BENZENE	ND	20	ND	6.3
56-23-5	CARBON TETRACHLORIDE	ND	20	ND	3.2
79-01-6	TRICHLOROETHENE	ND	20	ND	3.7
108-80-5	TOLUENE	78	20	21	5.3
127-18-4	TETRACHLOROETHENE	TR 2.3	20	TR 0.3	3.0
108-90-7	CHLOROBENZENE	ND	20	ND	4.4
1330-20-7	TOTAL XYLENES	29	20	6.7	4.6
106-46-7	1,4-DICHLOROBENZENE	ND	20	ND	3.3

ND - Not Detected

TR - Trace Level; Below Indicated Detection Limit

# CALCULATION SHEET

PAGES	PAGE
TEST NO. Flare Outlet Run 1	DATE 4-26-90
PROCESSED BY MTZ	CHECKED BY [Signature]

## LAB ANALYSIS

A. Filter Catch	1.3	mg
B. (1) Filter Acid		mg
(2) Filter Total Sulfate		mg
C. Probe Catch		mg
D. (1) Probe Acid		mg
(2) Probe Total Sulfate		mg
E. Impinger Catch		mg
F. (1) Impinger Acid	57.4	mg
(2) Impinger Total Sulfate		mg
G. Organic Extract		mg
H. H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble	4.6	mg
I. Particulate Train Corrected Gas Volume Metered		dscf
J. SO <sub>x</sub> Train Corrected Gas Volume Metered		dscf
K. Proxated H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O Mass ( $\frac{H \times I}{J}$ )		mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A-B*+C-D*+E-F*+G+K)		mg
M. Solid Particulate (L-G-K)		mg
N. Total Particulate (Corrected for Ammonium Sulfate)		
(A-B*+C-D*+E-F(1)+G+K)-(F(2)-(1)) $\cdot \frac{132}{134}$		mg
O. Solid Particulate (Corrected for Ammonium Sulfate)		
(N-G-J)		mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F*+G)	63.3	mg
Q. Solid Particulate (P-B*-D*-G)	58.7	mg
R. Total Particulate (Corrected for Ammonium Sulfate)		
(A+C+E-F(1)+G)-(F(2)-F(1)) $\cdot \frac{132}{134}$		mg
S. Solid Particulate (Corrected for Ammonium Sulfate)		
(R-B*-D*-G)		mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

# CALCULATION SHEET

PAGES	PAGE
TEST NO. Flare Outlet Run 2	DATE 4-27/90
PROCESSED BY MTZ	CHECKED BY [Signature]

## LAB ANALYSIS

A. Filter Catch		
B. (1) Filter Acid	0.0	mg
(2) Filter Total Sulfate		mg
C. Probe Catch		mg
D. (1) Probe Acid		mg
(2) Probe Total Sulfate		mg
E. Impinger Catch		mg
F. (1) Impinger Acid	22.6	mg
(2) Impinger Total Sulfate		mg
G. Organic Extract		mg
H. H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble	2.5	mg
I. Particulate Train Corrected Gas Volume Metered		dscf
J. SO <sub>x</sub> Train Corrected Gas Volume Metered		dscf
K. Procorated H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O Mass ( $\frac{H \times I}{J}$ )		mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A+B+C-D+E-F+G+K)		mg
M. Solid Particulate (L-G-K)		mg
N. Total Particulate (Corrected for Ammonium Sulfate)		
(A+B+C-D+E-F(1)+G+K)-(F(2)-(1)) $\times \frac{132}{134}$		mg
O. Solid Particulate (Corrected for Ammonium Sulfate)		mg
(N-G-J)		mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F+G)	25.1	mg
Q. Solid Particulate (P-B*-D*-G)	22.6	mg
R. Total Particulate (Corrected for Ammonium Sulfate)		
(A+C+E-F(1)+G)-(F(2)-F(1)) $\times \frac{132}{134}$		mg
S. Solid Particulate (Corrected for Ammonium Sulfate)		mg
(R-B*-D*-G)		mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

# CALCULATION SHEET

PAGES	PAGE
TEST NO. <i>Extraction Blank</i>	DATE <i>5-8-90</i>
PROCESSED BY <i>MZ</i>	CHECKED BY <i>[Signature]</i>

## LAB ANALYSIS

A. Filter Catch .....	_____	mg
B. (1) Filter Acid .....	_____	mg
(2) Filter Total Sulfate .....	_____	mg
C. Probe Catch .....	_____	mg
D. (1) Probe Acid .....	_____	mg
(2) Probe Total Sulfate .....	_____	mg
E. Impinger Catch .....	_____	mg
F. (1) Impinger Acid .....	<i>- 0.7</i>	mg
(2) Impinger Total Sulfate .....	_____	mg
G. Organic Extract .....	<i>3.4</i>	mg
H. H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O from SO <sub>x</sub> Train Thimble .....	_____	mg
I. Particulate Train Corrected Gas Volume Metered .....	_____	dscf
J. SO <sub>x</sub> Train Corrected Gas Volume Metered .....	_____	dscf
K. Pro-rated H <sub>2</sub> SO <sub>4</sub> ·2H <sub>2</sub> O Mass ( $\frac{HxI}{J}$ ) .....	_____	mg

## FILTER (PARTICULATE) TEMPERATURE GREATER THAN 200°F

L. Total Particulate (A+B+C-D+E-F+G+K) .....	_____	mg
M. Solid Particulate (L-G-K) .....	_____	mg
N. Total Particulate (Corrected for Ammonium Sulfate)		
(A+B+C-D+E-F(1)+G+K-[F(2)-(1)] $\cdot \frac{132}{134}$ ) .....	_____	mg
O. Solid Particulate (Corrected for Ammonium Sulfate)		
(N-G-J) .....	_____	mg

## FILTER TEMPERATURE LESS THAN 200°F

P. Total Particulate (A+C+E-F+G) .....	<i>2.7</i>	mg
Q. Solid Particulate (P-B*-D*-G) .....	_____	mg
R. Total Particulate (Corrected for Ammonium Sulfate)		
(A+C+E-F(1)+G-[F(2)-F(1)] $\cdot \frac{132}{134}$ ) .....	_____	mg
S. Solid Particulate (Corrected for Ammonium Sulfate)		
(R-B*-D*-G) .....	_____	mg

\* USE LOWER OF (1) AND (2)

Figure 5.1-5  
Calculation Data Sheet for Particulate Matter

APPENDIX C

Field Data Sheets





[illegible]

1

For the use of the President

Attest: William

Date 4-27-90  
Test Location OUTLET FLAKE  
Run Number 2B  
Stack Diameter inches 96"  
Dust Dimensions in. x in. 950  
Start Time REL, 55M  
Slack Pressure -0.05  
Stack Pressure \_\_\_\_\_  
Probe Number 10'  
Pilot Coefficient 0.840  
Pilot Number 10'  
Meter Bar Number N  
Orifice Coefficient L=1.00, AHD=1.2

REMARKS	UNIT	CO <sub>2</sub>	O <sub>2</sub>	CO
10000000				
20000000				
30000000				
40000000				
50000000				
60000000				
70000000				
80000000				
90000000				
100000000				
110000000				
120000000				
130000000				
140000000				
150000000				
160000000				
170000000				
180000000				
190000000				
200000000				
210000000				
220000000				
230000000				
240000000				
250000000				
260000000				
270000000				
280000000				
290000000				
300000000				
310000000				
320000000				
330000000				
340000000				
350000000				
360000000				
370000000				
380000000				
390000000				
400000000				
410000000				
420000000				
430000000				
440000000				
450000000				
460000000				
470000000				
480000000				
490000000				
500000000				
510000000				
520000000				
530000000				
540000000				
550000000				
560000000				
570000000				
580000000				
590000000				
600000000				
610000000				
620000000				
630000000				
640000000				
650000000				
660000000				
670000000				
680000000				
690000000				
700000000				
710000000				
720000000				
730000000				
740000000				
750000000				
760000000				
770000000				
780000000				
790000000				
800000000				
810000000				
820000000				
830000000				
840000000				
850000000				
860000000				
870000000				
880000000				
890000000				
900000000				
910000000				
920000000				
930000000				
940000000				
950000000				
960000000				

NUMBER	TARE	FINAL WT.
65		

[illegible]

# METHOD 2 GAS VELOCITY AND VOLUME DATA FORM

PLANT Howlitt Landfill

DATE 4-26-90

RUN NO. INITIAL TRAVERSE

STACK DIAMETER, in. 96"

BAROMETRIC PRESSURE, in. Hg. 30.04

STATIC PRESSURE IN STACK ( $P_s$ ), in. Hg. 8

OPERATORS RRK, SSM, RV

SCHEMATIC OF STACK  
CROSS SECTION

Field data					
Traverse point number	Position, in.	Velocity head ( $\Delta p_s$ ), in. $H_2O$	Stack temp., °F	Cyclonic flow determination	
				$\Delta p_s$ at 0° reference	Angle ( $\alpha$ ) which yields a null $\Delta p$
A-1	2.02	0.005	1410		<5
2	6.43	0.005			<5
3	11.33	0.005			<5
4	16.99	0.017			<5
5	24.0	0.017			<5
6	34.18	0.020			<5
7	61.82	0.015			<5
8	72.00	0.015			<5
9	79.00	0.020			<5
10	84.67	0.025			<5
11	89.57	0.025			<5
12	93.98	0.025			<5
B-1		0.005			<5
2		0.000			<5
3		0.000			<5
4		0.015			<5
5		0.017			<5
6		0.020			<5
7		0.020			<5
8		0.017			<5
9		0.017			<5
10		0.010			<5
11		0.000			<5
12		0.000			<5
Average angle ( $\alpha$ )					

TOTAL COMBUSTION ANALYSIS  
SCAQMD METHOD 25  
FIELD SAMPLING DATA SHEET

Job #: 101-001  
Facility: Hewlett Landfill  
Location: North Hollywood  
Date: 4/26/90  
Operator: RV/RH/SSM

Control Device: Flare  
Sample Location: Inlet  
Ambient Temperature: 85  
Barometric Pressure: \_\_\_\_\_

SAMPLE A

Tank #: F Trap #: F  
Initial Vacuum: 4.5 mm Hg  
Final Vacuum: 240

ANALYSIS PRESSURE 800

TIME	VACUUM ("Hg)	FLOW (cc/min)
0	30	72
5	29	72
10	28	72
15	27	72
20	26	72
25	25	72
30	24	72
35	23	72
40	22	72
45		

SAMPLE B

Tank #: G Trap #: G  
Initial Vacuum: 4.5 mm Hg  
Final Vacuum: 225

800

TIME	VACUUM ("Hg)	FLOW (cc/min)
1654 0	30	72
5	29	72
10	26	72
15	25	72
20	24	72
25	24	72
30	23	72
35	22	72
40	21	72
45		

Leak Rate Pre Test: OK

Post Test: \_\_\_\_\_

HORIZON

## INTEGRATED BAG SAMPLING DATA FORM

Run number 1A & B outlet

Date 4-15-90

Plant HEWLETT LANDFILL

Sampling location OUTLET OF FLARE

Barometric pressure 30.04

Ambient temp. °C 85 Stack temp. °C 1300

Operator RRH

[illegible]

2

$$\% \text{ Dev.} = \left( \frac{Q - Q_{avg}}{Q_{avg}} \right) 100; \text{ must be } \leq 10\%.$$

## INTEGRATED BAG SAMPLING DATA FORM

Run number 1A0B Inlet

Date 4-15-90

Plant NEWLETT LANDFILL

Sampling location Hewlett Landfill - Inlet - Flare

Barometric pressure 30.04

Ambient temp. °C 85

Stack temp. °C                     

Operator RRN, SSM, KU

Time	Traverse point	Rate meter flow, rate (Q), $\text{cm}^3/\text{min}$	% Dev. <sup>a</sup>
1605	IN/ET	100 CC	
10		100 CC	
20		100 CC	
30		100 CC	
stop 40		100 CC	
50		100 CC	
60		100 CC	
		Avg =	

a

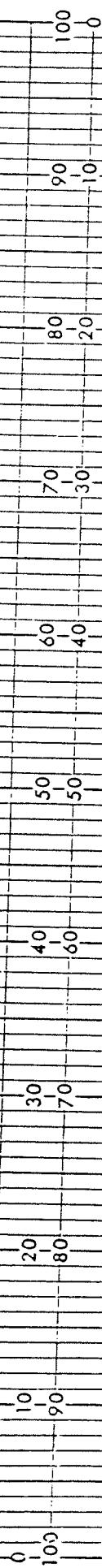
$$\% \text{ Dev.} = \left( \frac{Q - Q_{avg}}{Q_{avg}} \right) 100; \text{ must be } \leq 10\%.$$

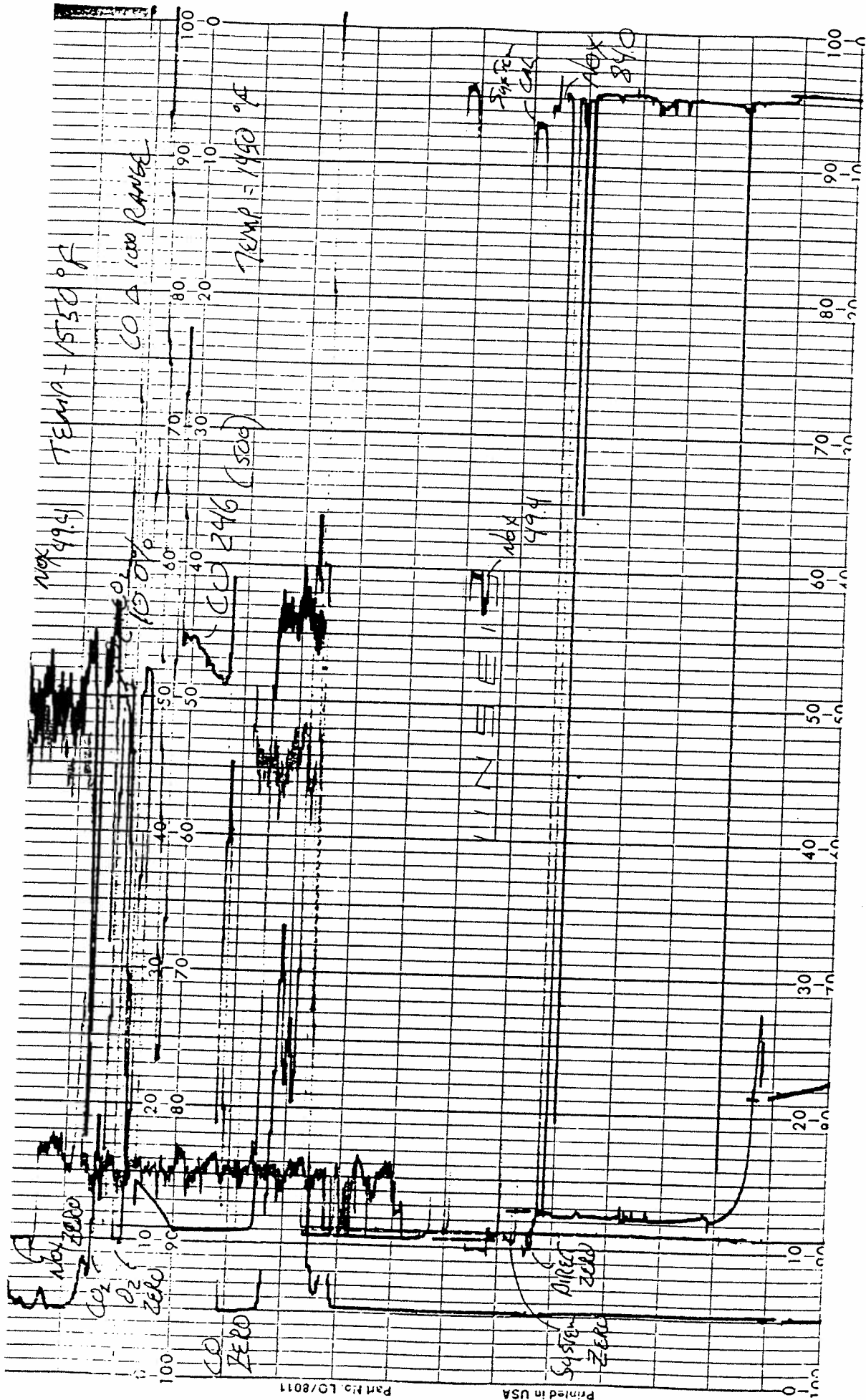
HORIZON FLARE TEST  
TN59

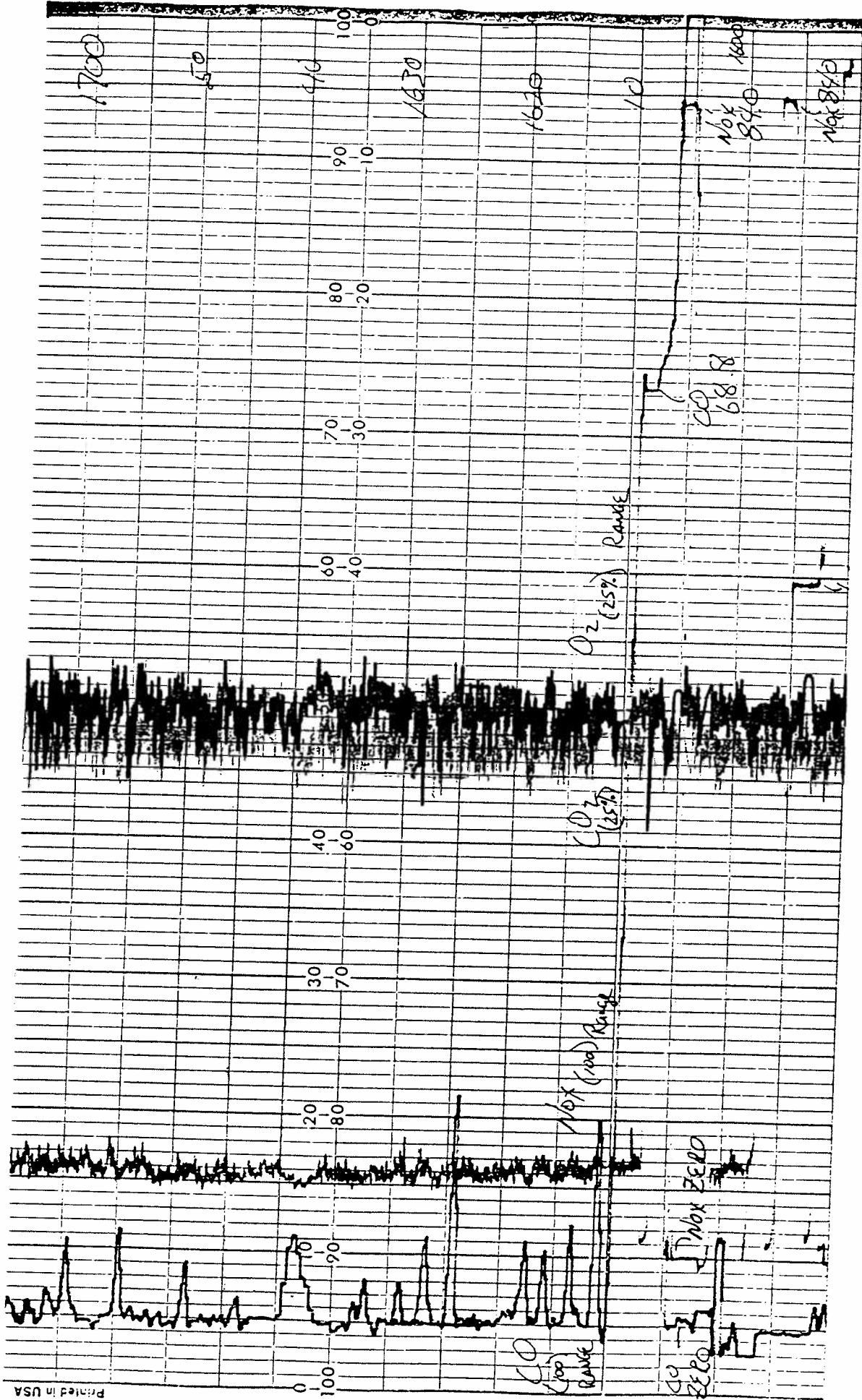
4-26-90 @ CAL MAT NORTH HOLLYWOOD

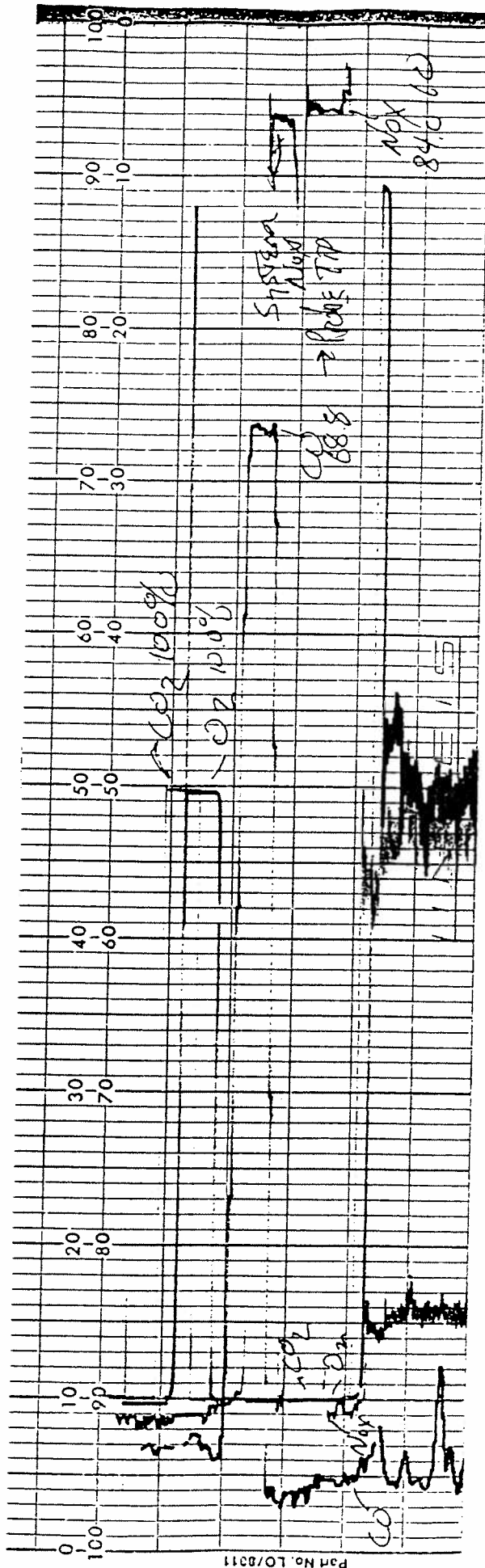
5:10 PM

5:00 PM











Date: 4-26-90

Page 2 of 2

## Continuous Emissions Monitoring - C.A.R.B. Method 1-100

Client : CALMAT  
Site : NEWITT LAND FILLUnit : FLARE  
Run # : 1Times : Beg. Cal# 1600 Start# 1610 Stop# 1710 End Cal# 1710

## \*\* MEASURED EMISSIONS COMPONENTS \*\*

Component:	In NOx Units : ppm	In O2 %	Out NOx ppm	Out O2 %	Out CO ppm	Out CO2 %	Conversion Efficiency (In-Out) / In NOx @ 15% O2
------------	-----------------------	------------	----------------	-------------	---------------	--------------	--

## \*\* INSTRUMENT CAL RANGE, SPAN &amp; DATA RANGE \*\*

C. Range :	<u>100</u>	<u>100</u>	<u>25</u>	<u>100</u>	<u>25</u>
Span :	<u>84.6</u>	<u>10</u>	<u>68.8</u>	<u>10</u>	
D. Range :	<u>100</u>	<u>100</u>	<u>25</u>	<u>100</u>	<u>25</u>

## \*\* RAW EMISSIONS DATA \*\*

1610	0		<u>7</u>	<u>9.75</u>	<u>15</u>	<u>9.5</u>
	5		<u>6</u>	<u>10.5</u>	<u>5</u>	<u>10.0</u>
	10		<u>7</u>	<u>10.2</u>	<u>0</u>	<u>10.0</u>
	15		<u>6</u>	<u>10.4</u>	<u>16</u>	<u>10.0</u>
	20		<u>6</u>	<u>10.2</u>	<u>0</u>	<u>11.5</u>
	25		<u>6</u>	<u>10.0</u>	<u>0</u>	<u>10.5</u>
	30		<u>7</u>	<u>10.2</u>	<u>6</u>	<u>9.5</u>
	35		<u>7</u>	<u>10.5</u>	<u>0</u>	<u>9.7</u>
	40		<u>5</u>	<u>10.2</u>	<u>4</u>	<u>10.0</u>
	45		<u>6</u>	<u>10.0</u>	<u>6</u>	<u>10.0</u>
	50		<u>6</u>	<u>10.2</u>	<u>6</u>	<u>10.0</u>
	55		<u>7</u>	<u>10.7</u>	<u>1</u>	<u>10.2</u>
1710	60		<u>8</u>	<u>10.5</u>	<u>2</u>	<u>10.0</u>
Raw Avg. :			<u>6.5</u>	<u>10.2</u>	<u>4.7</u>	<u>10.1</u>
Maximum :			<u>8</u>	<u>10.7</u>	<u>16</u>	<u>11.5</u>
Minimum :			<u>5</u>	<u>9.75</u>	<u>0</u>	<u>9.5</u>

## \*\* CALIBRATION ADJUSTMENTS \*\*

Zero :		<u>+1</u>	<u>0</u>	<u>+1</u>	<u>0</u>
Span :		<u>-3</u>	<u>0</u>	<u>0</u>	<u>0</u>
Span Set :					

## \*\* DRIFT CORRECTED EMISSIONS \*\*

Average : \_\_\_\_\_

## \*\* NOTES \*\*

$$DCAvg = (RawAvg + (ZeroAdj/2) * (DataRng/CalRng)) * (1 + (SpanAdj/(2 * CalSpan)))$$

APPENDIX D  
Calibrations

# Control Box Calibration Data

Date: 3/21/90  
 Meter Box Number 2  
 Orifice Number: 994  
 DGM Number: N/A

Calibrated by: R. Halk  
 Barometric Pressure: 30.03

Orifice setting (H)	Gas Volumes			Temperatures			Time (min)	Y	
	Wet Test (cu.ft)	Dry Gas Initial (cu.ft)	Dry Gas Final (cu.ft)	DGM Initial (F)	DGM final (F)	WTM (F)			
0.5	7.50	38.800	46.401	97	99	74	17.88	1.0298	1.
1	8.10	46.600	55.100	97	99	74	14.53	0.9933	1.
1.5	11.40	55.300	67.202	98	99	74	17.05	0.9981	1.
2	11.83	67.420	79.688	99	101	74	15.32	1.0063	1.
3	10.88	80.000	91.245	99	102	74	11.45	1.0082	1.
AVERAGE								1.0069	1.1

Calibrated by: Robert B. Halk  
 Reviewed by: J. Mrzek

HORIZON

# Thermocouple Calibration Data

Date: 3/21/90  
 Calibrated by: R. Halk  
 Barometric Pressur 30.03

Termocouple ID	Ice Water		Amb ient		Boiling Water		Other
	reference	Tc	reference	Tc	reference	Tc	reference
FB-1	33	35	72	72	212	210	225
FB-2	33	35	72	71	212	211	225
IMP-1	33	35	72	72	212	-	
IMP-2	33	33	72	72	212	-	
DGM-1 inlet	33	34	72	73	212	210	
DGM-1 outlet	33	35	72	72	212	213	
DGM-2 outlet	33	33	72	71	212	215	
DGM-2 inlet	33	34	72	71	212	213	
Stack #3 - 1	33	36	72	73	212	211	
Stack #5 - 1	42	42	72	70	212	210	

\* Heated Filter Box

Calibrated by: \_\_\_\_\_

HORIZON

OLD TO: *Horizon air measurement*

COMPANY

P.O. NO.

S.O. NO.

DA

2.1 Type 8 Pitot Tube. The Type 8 pitot tube (Figure 2-1) shall be made of metal tubing (e.g., stainless steel). It is recommended that the external tubing diameter (dimension  $D_t$ , Figure 2-2b) be between 0.48 and 0.95 centimeters (H. and  $\frac{1}{16}$  inch). There shall be an equal distance from the base of each leg of the pitot tube to its base opening plane (dimensions  $P_1$  and  $P_2$ , Figure 2-2b); it is recommended that this distance be between 1.00 and 1.50 times the external tubing diameter. The base openings of the pitot tube shall, preferably, be aligned as shown in Figure 2-2; however, slight misalignments of the openings are permissible (see Figure 2-3).

The Type 8 pitot tube shall have a known coefficient, determined as outlined in Section 4. An identification number shall be assigned to the pitot tube; this number shall be permanently marked or engraved on the body of the tube.

#### 4. Calibration

4.1 Type 8 Pitot Tube. Before its initial use, carefully examine the Type 8 pitot tube in top, side, and end views to verify that the face openings of the tube are aligned within the specifications illustrated in Figures 2-2 or 2-3. The pitot tube shall not be used if it fails to meet these alignment specifications.

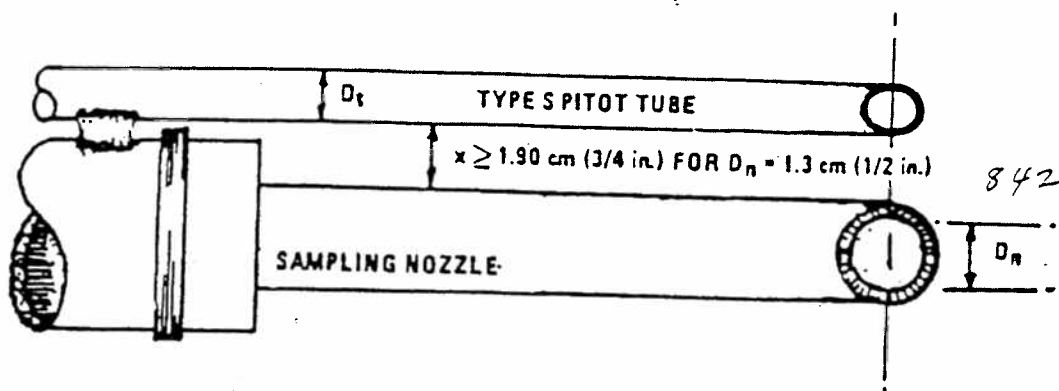
After verifying the face opening alignment, measure and record the following dimensions of the pitot tube:

(a) the external tubing diameter (dimension  $D_t$ , Figure 2-2b); and (b) the base-to-opening plane distances (dimensions  $P_1$  and  $P_2$ , Figure 2-2b). If  $D_t$  is between 0.48 and 0.95 cm (H. and  $\frac{1}{16}$  in.) and if  $P_1$  and  $P_2$  are equal and between 1.00 and 1.50 H., there are two possible options: (1) the pitot tube may be calibrated according to the procedure outlined in Sections 4.1.2 through 4.1.3 below, or (2) a baseline (isolated tube) coefficient value of 0.84 may be assigned to the pitot tube. Note, however, that if the pitot tube is part of an assembly, calibration may still be required, despite knowledge of the baseline coefficient value (see Section 4.1.1). If  $D_t$ ,  $P_1$ , and  $P_2$  are outside the specified limits, the pitot tube must be calibrated as outlined in 4.1.2 through 4.1.3 below.

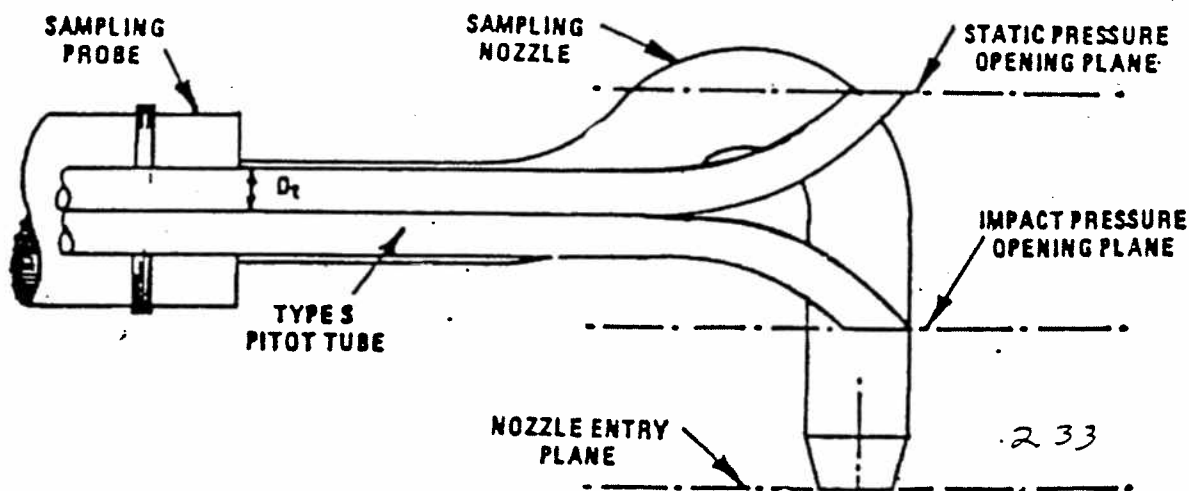
4.1.1 Type 8 Pitot Tube Assemblies. During sample and velocity traverses, the isolated Type 8 pitot tube is not always used; in many instances, the pitot tube is used in combination with other source-sampling components (thermocouple, sampling probe, nozzle) as part of an "assembly." The presence of other sampling components can sometimes affect the baseline value of the Type 8 pitot tube coefficient (Citation 9 in Section 8); therefore an assigned (or otherwise known) baseline coefficient

value may or may not be valid for a given assembly. The baseline and assembly coefficient values will be identical only when the relative placement of the components in the assembly is such that aerodynamic interference effects are eliminated. Figures 2-4 through 2-8 illustrate interference-free component arrangements for Type 8 pitot tubes having external tubing diameters between 0.48 and 0.95 cm (H. and  $\frac{1}{16}$  in.). Type 8 pitot tube assemblies that fail to meet any or all of the specifications of Figures 2-4 through 2-8 shall be calibrated according to the procedure outlined in Sections 4.1.2 through 4.1.3 below, and prior to calibration, the values of the inter-component spacings (pitot-nozzle, pitot-thermocouple, pitot-probe sheath) shall be measured and recorded.

Note.—Do not use any Type 8 pitot tube assembly which is constructed such that the impact pressure opening plane of the pitot tube is below the entry plane of the nozzle (see Figure 2-6b).



A. BOTTOM VIEW; SHOWING MINIMUM PITOT-NOZZLE SEPARATION.



B. SIDE VIEW; TO PREVENT PITOT TUBE FROM INTERFERING WITH GAS FLOW STREAMLINES APPROACHING THE NOZZLE, THE IMPACT PRESSURE OPENING PLANE OF THE PITOT TUBE SHALL BE EVEN WITH OR ABOVE THE NOZZLE ENTRY PLANE.

Figure 2-6. Proper pitot tube - sampling nozzle configuration to prevent aerodynamic interference; buttonhook - type nozzle; centers of nozzle and pitot opening aligned;  $D_t$  between 0.48 and 0.95 cm ( $\frac{3}{16}$  and  $\frac{3}{8}$  in.).

SERIAL # 393  
5-4-90

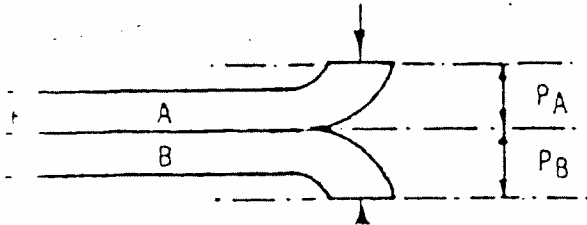
TYPE S PITOT TUBE INSPECTION DATA FORM

Tubing diameter,  $D_t$  \_\_\_\_\_ in.

Pitot Tube Assembly Level? Yes / No

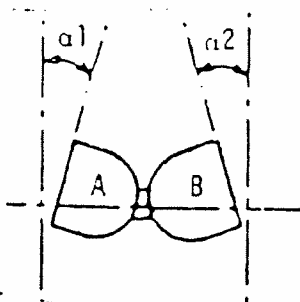
Pitot Tube Openings Damaged? Yes / No

A-SIDE PLANE



NOTE:

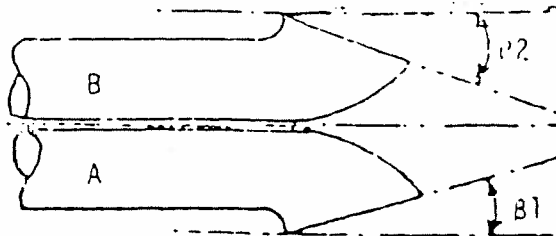
$$\begin{cases} 1.05 D_t < P < 1.50 D_t \\ P_A = P_B \end{cases} \quad \begin{array}{l} P_A = .517 \text{ in.} \\ P_B = .526 \text{ in.} \end{array}$$



$$\alpha_1 = 1^\circ$$

$$\alpha_2 = 1^\circ$$

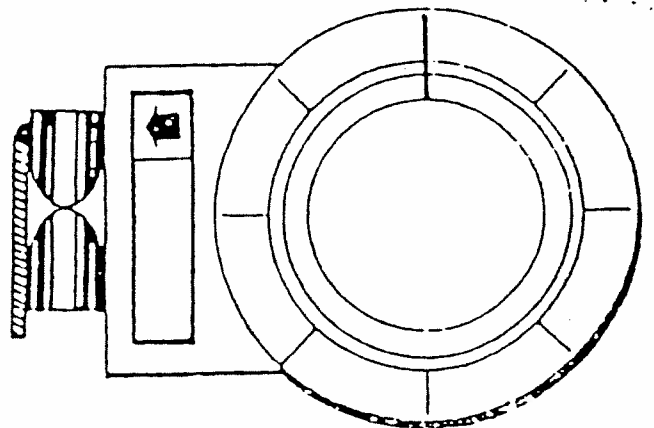
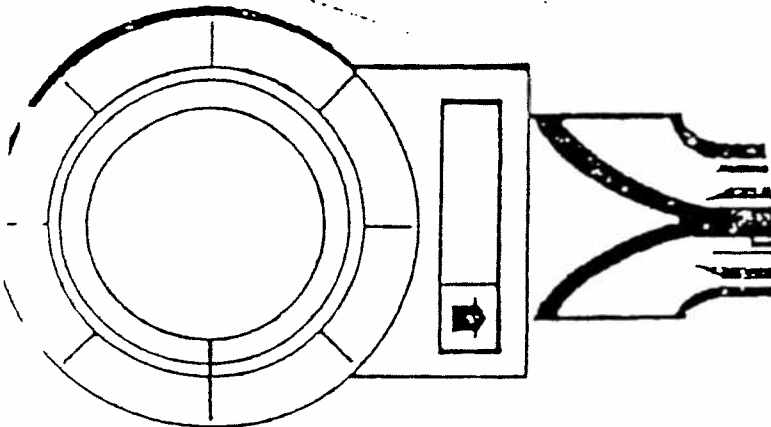
( $< 10^\circ$ )



$$\beta_1 = 0^\circ$$

$$\beta_2 = 0^\circ$$

( $< 5^\circ$ )



Level Position to Find  $\gamma$

$$Z = A \sin \gamma \quad \phi \text{ in. } (< 1/8 \text{ in.})$$

Level Position to find  $\theta$

$$W = A \sin \theta \quad \phi \text{ in. } (< 1/32 \text{ in.})$$

Comments pitot FOR PROBE #1

Checked by: RIZH

Date: 5-4-90

Calibration Required? POST

pitot tube  
SERIAL # 394

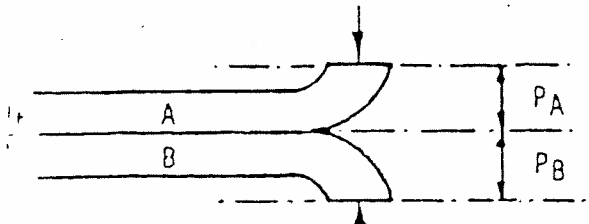
# TYPE S PITOT TUBE INSPECTION DATA FORM

Tubing diameter,  $D_t$  \_\_\_\_\_ in.

Pitot Tube Assembly Level? Yes / No

Pitot Tube Openings Damaged? Yes / No

A-SIDE PLANE

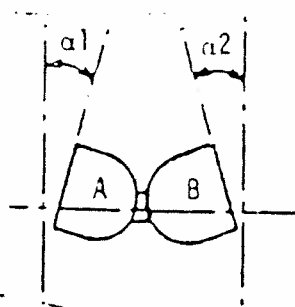


NOTE:

$$\begin{cases} 1.05 D_t < P < 1.1 D_t \\ P_A = P_B \end{cases}$$

$P_A = .526$  in.

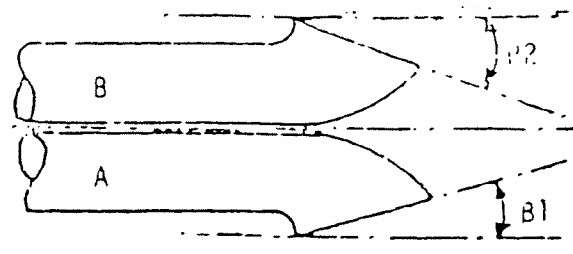
$P_B = .521$  in.



$\alpha_1 = 1^\circ$

$\alpha_2 = 0^\circ$

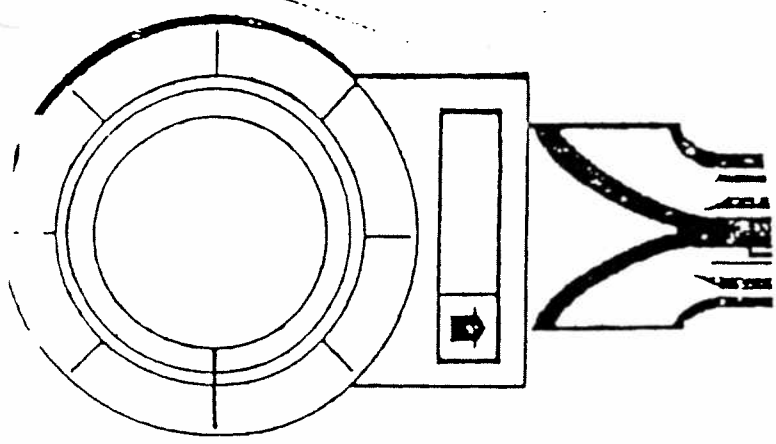
( $< 10^\circ$ )



$B_1 = 0$  in.

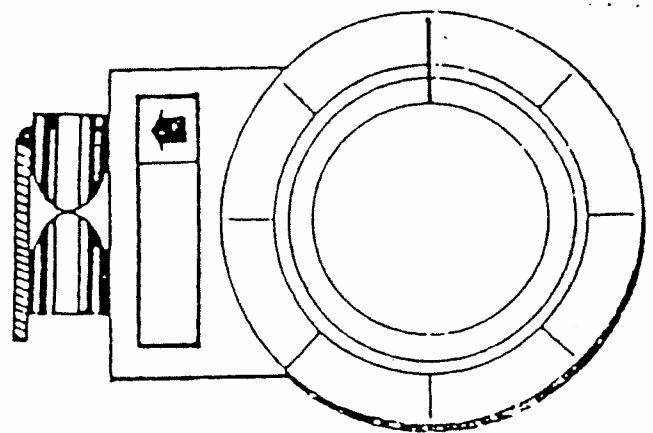
$B_2 = 0$  in.

( $< 5^\circ$ )



Level Position to Find  $\gamma$

$Z = A \sin \gamma$  .030 in. ( $< 1/8$  in.)



Level Position to find  $\theta$

$W = A \sin \theta$  0 in. ( $< 1/32$  in.)

Comments PROBE #2

Checked by: RZH Date: 5-4-90

Calibration Required? POST

# Magnehelic Gauge Calibration Data

0" - .25" Range

Date: 4-5-90

Barometric Pressure: 30.04

Calibrated by: S. Mrazek

Target Reference Pressure	serial #	0.25" Mag #1		0.25" Mag #2		reference
		reference	gauge	reference	gauge	
0.05		0.05	0.053	0.05	0.050	
0.10		0.10	0.103	0.10	0.950	
0.15		0.15	0.160	0.15	0.145	
0.20		0.20	0.205	0.20	0.190	
0.25		0.25	0.250	0.25	0.245	
0.30						
Corection Factor		0.9682		1.0321		

For each magnehelic, use the following target pressures:

0.25" gauge	0.50" gauge	1.0" gauge
0.03	0.05	0.10
0.08	0.15	0.30
0.15	0.30	0.60
0.23	0.45	0.90

Date: 4-5-90

Calibrated by: Polat Halk

**HORIZON**

APPENDIX E

Chain-of-Custody Records

Client/Project Name Ca/MAT						Project Location HEWITT LANDFILL								
Project No. 001-001			Field Logbook No.			ANALYSES								
Sampler: (Signature) <i>[Signature]</i>			Chain of Custody Tape No.			SCAPMO Method 5.1								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	REMARKS									
CM-O-PF-1	4/24				X									
CM-FH-1	4/24				X									
CM-O-PF-2	4/27				X									
CM-FH-2	4/27				X									
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time	
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time	
Relinquished by: (Signature)					Date	Time	Received for Laboratory: (Signature)					Date	Time	
Sample Disposal Method:					Disposed of by: (Signature) <i>Michael Fry</i>					4-27-91				
					Date	Time						Date	Time	
SAMPLE COLLECTOR					ANALYTICAL LABORATORY									
HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781														
													Nº - 281	

Nº 281

# CHAIN OF CUSTODY RECORD

Client/Project Name <b>CA/MAT</b>			Project Location <b>Hewitt Landfill</b>		
Project No. <b>COI-001</b>			Field Logbook No.		
Sampler: (Signature) <i>R. V. [Signature]</i>			Chain of Custody Tape No.		

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	ANALYSES						REMARKS	
					TNMHC	CH <sub>4</sub>	H <sub>2</sub> S	G-B Sulfur	CO <sub>2</sub>	CO		
CM-O-1B-TNMHC	4/26/98		91160-3									
CM-O-1A-TNMHC			-4		✓	✓						TRAP#
HL-T-S/H <sub>2</sub> S			-5		✓	✓						
TANK # F	4/26/98		-6									
G			-7		✓	✓			✓	✓		Pressure F 240/800 G 225/800

Relinquished by: (Signature) <i>[Signature]</i>	Date 4/26/98	Time 6:45 pm	Received by: (Signature) <i>[Signature]</i>	Date 4/26/98	Time 6:45 pm
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
Sample Disposal Method:	Disposed of by: (Signature)		Date	Time	

SAMPLE COLLECTOR		ANALYTICAL LABORATORY	
HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781		N° 280	

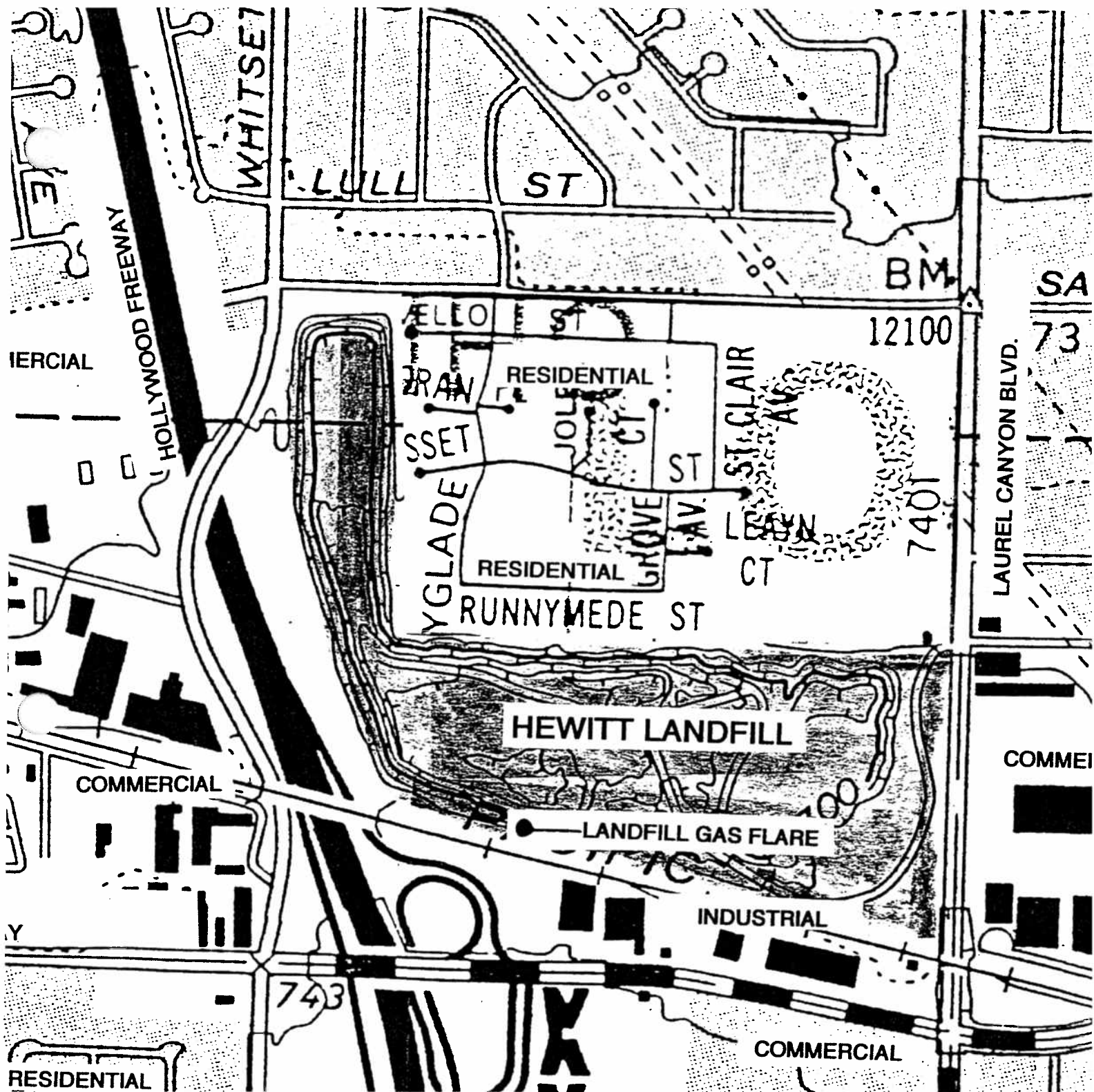
# CHAIN OF CUSTODY RECORD

Client/Project Name <b>Calmat</b>			Project Location <b>North Hollywood</b>			ANALYSES  CO2 TRAP# TANK#						REMARKS
Project No. <b>C01-001</b>			Field Logbook No. <b>SJM-1</b>									
Sampler: (Signature) <b>[Signature]</b>			Chain of Custody Tape No.									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample								
ICV # 12	4/27		91160-6	TRAP # F	X	F	F					LANDFILL INLETS
9	↓		91160-7	TRAP # G	X	G	G					
Relinquished by: (Signature) <b>[Signature]</b>				Date <b>5-1-90</b>	Time <b>8:30 A.M.</b>	Received by: (Signature) <b>[Signature]</b>				Date	Time	
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <b>[Signature]</b>				Date <b>5-1-90</b>	Time <b>8:30</b>	
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time	
SAMPLE COLLECTOR  HORIZON AIR MEASUREMENT SERVICES 996 Lawrence Drive, Suite 117 Newbury Park, CA 91320 (805) 498-8781				ANALYTICAL LABORATORY  <b>AAA</b>						Nº 320		

[illegible]

**Nº 282**

**Attachment 3**  
**Area Map of the Hewitt Landfill**





## SCS FIELD SERVICES

January 18, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the Former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of December 1 through 31, 1990.

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit.

Mr. George Cosby  
January 18, 1991  
Page Two

This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Test results collected during the reporting period indicated that no measurable amounts of methane gas were detected in any monitoring well except Monitoring Well No. 11B. Adjustments to extraction wells adjacent to this monitoring well were implemented. In addition, adjustments to mainline flow control valves were implemented in an attempt to maintain additional header vacuum at the extraction wells in this area. By the end of the reporting period, methane gas levels in Monitoring Well No. 11B had dropped to none detected.

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Low levels of methane gas were detected beneath several storage containers. Adjustments to extraction wells were implemented to clear this methane gas build-up and Cal Mat staff notified. It is anticipated that these adjustments will be successful in controlling methane gas migration in these areas.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on December 12, 1990, SCS-FS conducted a temperature survey at each of the extraction wells. The result

Mr. George Cosby  
January 18, 1991  
Page Three

of this survey indicated subsurface temperatures ranged from approximately 59 to 142 degrees Fahrenheit (see Table 1). Although some of these temperatures are somewhat high for anaerobic decomposition, they do not necessarily indicate that subsurface combustion currently exists. However, SCS-FS recommends that all extraction wells that exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography. SCS-FS will test LFG temperatures at each extraction well on a quarterly basis to enable development of a data base. The next quarterly test is scheduled for March 1991. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

Utilizing drawings provided by Cal Mat and operational data collected over previous reporting periods, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey. (If a more complete "As-Built" drawing were available, a more extensive survey could be conducted. SCS-FS understands that Cal Mat staff are currently working together to develop these "as built" drawings).

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1550 degrees Fahrenheit.

The LFG flow recording device located within the Blower/Flare Station was observed to be malfunctioning. This device should be repaired as soon as possible. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of this observation indicated the system appeared to be in satisfactory operating condition.

Mr. George Cosby  
January 18, 1991  
Page Four

During the reporting period, Cal Mat reported that on several occasions the Blower/Flare Station had shut down and was subsequently restarted by on-site staff. Additionally, on December 23, 1990, SCS-FS was contacted by on-site Cal Mat staff to assist in troubleshooting and restarting the Blower/Flare Station. On December 23, 1990 several flex hoses were found to be disconnected. These flex hoses were reconnected and the Blower/Flare Station started without incident.

SCS-FS believes that all shut downs were caused by flex hoses disconnecting in response to the above ground headerpipe contracting by being exposed to low ambient temperatures. SCS-FS is currently developing a mitigation plan to reduce the number of shut downs caused by disconnected flex hoses.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. Finally, vegetation overgrowth in the vicinity of the BFS was observed and should be removed.

#### Quarterly Site Observation

In accordance with the approved work scope, on December 13, 1990, SCS-FS conducted an intensive quarterly observation of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. In addition, plans were developed to reslope the header pipe serving Extraction Well No. 26. This work is scheduled to be performed during the next reporting period.

Results of this observation indicated the system appeared to be operating satisfactorily.

Mr. George Cosby  
January 18, 1991  
Page Five

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and appeared to be meeting the operational criteria.

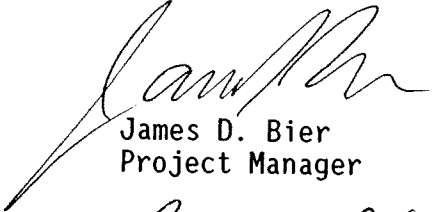
### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

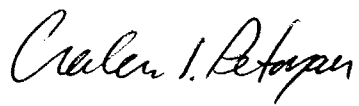
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
JDB\0789003

TABLE 1. RESULTS OF LANDFILL GAS EXTRACTION WELL TESTING AT THE  
FORMER HEWITT PIT LANDFILL, NORTH HOLLYWOOD, CALIFORNIA,  
PERIMETER AND INTERIOR SYSTEMS  
(December 12, 1990)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)	Temperature (Degrees Fahrenheit)
P-1	ND	17.0	-0.16	-0.12	79
P-2	1.0	14.0	-0.16	ND	73
P-3	ND	14.0	-0.16	0.10	62
P-4	ND	17.0	-0.16	0.04	64
P-5	ND	18.0	-0.16	0.04	68
P-6	ND	18.0	-0.14	0.02	71
P-7	1.0	16.0	-0.14	0.04	71
P-8	ND	12.0	-0.14	0.01	69
P-9	ND	19.0	-0.14	0.14	68
P-10	1.0	14.0	-0.14	0.04	65
P-11	ND	14.0	-0.14	0.06	66
P-12	ND	15.0	-0.14	0.12	69
P-13	ND	16.0	-0.14	0.14	67
P-13A	ND	5.0	-0.18	0.01	64
P-13B	5.0	ND	-0.18	-0.01	65
P-14	1.0	12.0	-0.14	0.04	68
P-15	ND	12.0	-0.14	0.12	70
P-16	ND	16.0	-0.14	0.06	67
P-17	ND	5.0	-0.14	0.16	67
P-18	ND	15.0	-0.14	0.04	79
P-19	1.0	7.0	-0.14	0.14	86
P-20	ND	16.0	-0.14	0.04	68
P-21	5.0	6.0	-0.16	-0.02	114
P-22	ND	12.0	-0.16	0.02	65
P-23	1.0	10.0	-0.16	0.02	64
P-24	15.0	4.0	-0.16	-0.06	120
P-25	11.0	6.0	-0.16	-0.12	131
P-26	4.0	14.0	-0.16	-0.04	116
P-27	ND	17.0	-0.18	0.02	68
P-28	15.0	1.0	-0.16	ND	142
P-29	5.0	7.0	-0.16	-0.06	120
P-30	5.0	ND	-0.16	-0.01	76
P-31	7.0	10.0	-0.14	ND	107
P-32	5.0	14.0	-0.14	-0.05	106
P-33	ND	16.0	-0.14	0.01	66
P-34	ND	15.0	-0.14	ND	81
P-35	3.0	12.0	-0.14	-0.05	112
P-36	4.0	14.0	-0.14	-0.06	120
P-37	ND	20.0	-0.14	0.02	65
P-38	ND	16.0	-0.16	0.02	96
P-39	ND	16.0	-0.16	0.02	62

TABLE 1. (continued)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)	Temperature (Degrees Fahrenheit)
W-1	16.0	ND	-0.20	-0.20	66
W-2	14.0	2.0	-0.20	-0.06	65
W-3	41.0	1.0	-0.18	-0.18	81
W-4	21.0	ND	-0.18	-0.02	66
W-5	34.0	ND	-0.20	-0.16	114
W-6	19.0	ND	-0.20	-0.12	64
W-7	52.0	ND	-0.24	-0.22	96
W-8	10.0	1.0	-0.24	-0.04	96
W-9	22.0	ND	-0.26	-0.08	89
W-10	24.0	1.0	-0.30	-0.04	74
W-11	5.0	15.0	-0.32	-0.01	62
W-12	24.0	1.0	-0.36	-0.10	64
W-13	17.0	1.0	-0.38	-0.06	103
W-14	15.0	ND	-0.42	-0.02	79
W-15	3.0	18.0	-0.44	-0.42	66
W-16	38.0	ND	-1.20	-0.32	98
W-17	22.0	5.0	-1.20	-0.04	64
W-18	31.0	2.0	-1.20	-0.10	81
W-19	31.0	ND	-1.50	-0.26	60
W-20	37.0	ND	-0.42	-0.38	67
W-21	36.0	1.0	-0.42	-0.38	112
W-22	##	##	##	##	##
W-23	37.0	3.0	-0.08	-0.74	68
W-24	25.0	4.0	-16.0	-0.40	67
W-25	41.0	2.0	-16.0	-0.35	129
W-26	16.0	ND	-10.0	-0.50	106
W-27	40.0	ND	-0.80	-0.72	87
W-28	39.0	1.0	-19.0	-0.64	75
W-28A	40.0	3.0	-4.0	-0.21	134
W-28B	49.0	1.0	-4.0	-0.01	105
W-29	21.0	7.0	-19.0	-16.0	59
W-30	51.0	ND	-10.0	-0.10	72
W-31	34.0	4.0	-10.0	-7.50	70
W-32	21.0	1.0	-10.0	-0.75	142
W-33	24.0	1.0	-10.0	-10.0	89
W-36	24.0	5.0	-10.0	-5.00	116
W-37	37.0	3.0	-10.0	-9.50	111
W-38	29.0	6.0	-10.0	-6.00	106

=====

P-1 = Perimeter Extraction Well No. 1

W-1 = Interior Extraction Well No. 1

ND = None Detected

\* = Instrument: Gastech Model 1939-OX or Equal

\*\* = Instrument: Dwyer Magnehelic (measured in inches of water column)

# = Note: Temperature data collected on October 31, 1990

## = Extraction Well destroyed or lost

## SCS FIELD SERVICES

February 26, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the Former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of January 1 through 31, 1991.

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-0X Hydrocarbon Surveyor or comparable unit.

Mr. George Cosby  
February 26, 1991  
Page Two

This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Test results collected during the reporting period indicated that no measurable amounts of methane gas were detected in any monitoring well except at Monitoring Well Nos. 11B, 41, and 42. Adjustments to extraction wells adjacent to these monitoring wells were implemented. In addition, adjustments to mainline flow control valves were implemented in an attempt to maintain additional header vacuum at the extraction wells in this area. As of the date of this report, methane gas levels in these three monitoring wells has dropped to none detected.

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Low levels of methane gas were detected beneath several storage containers. All other methane gas readings were none detected. Adjustments to extraction wells were implemented to clear this methane gas build-up. It is anticipated that these adjustments will be successful in controlling methane gas migration in these areas.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

Mr. George Cosby  
February 26, 1991  
Page Three

In response to these overpull concerns, SCS-FS will test LFG temperatures at each extraction well on a quarterly basis to enable development of a data base. The next quarterly test is scheduled for February 1991. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

**SCS-FS continues to recommend that all extraction wells that previously exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography.**

Utilizing drawings provided by Cal Mat and operational data collected over previous reporting periods, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey. (If a more complete "As-Built" drawing were available, a more extensive survey could be conducted. SCS-FS understands that Cal Mat staff is currently working to develop these "as built" drawings).

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, SCS-FS was informed by Cal Mat staff that the BFS had been experiencing periodic non-scheduled shut-downs. On January 23, 1991, representatives from SCS-FS, Cal Mat, and Klienfelder had conducted an on-site investigation to resolve these periodic shut-downs.

During this investigation it was determine that the burner head flame arrestors were clogged and in need of cleaning. In addition, a 12 inch ITC flexhose located outside the BFS was found to have a small leak allowing air to enter the main headerpipe. SCS-FS temporarily repaired the flexhose and has ordered a replacement hose. In addition, SCS-FS is scheduled to clean the clogged frame arrestors during the next reporting period.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1550 degrees Fahrenheit.

The LFG flow recording device located within the Blower/Flare Station was observed to be malfunctioning. **This device should be repaired as soon as possible.** All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

On January 9 and 11, 1991, SCS-FS assisted a grading contractor in activities to alleviate a low spot (created by differential site settlement) in the header serving Extraction Well No. W-26. In addition, repairs to damaged PVC connecting fittings were completed at Extraction Well Nos. W-24 and W-25, and the condensate trap between Extraction Well Nos. W-28A and W-28B.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After recent rains, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. Finally, vegetation overgrowth in the vicinity of the BFS was observed and should be removed.

#### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and appeared to be meeting the operational criteria.

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur

Mr. George Cosby  
February 26, 1991  
Page Five

subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
JDB\0789003

TABLE 1. RESULTS OF LANDFILL GAS EXTRACTION WELL TESTING AT THE  
FORMER HEWITT PIT LANDFILL, NORTH HOLLYWOOD, CALIFORNIA,  
PERIMETER AND INTERIOR SYSTEMS  
(January 9, 1991)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)
P-1	ND	16.0	-0.30	-0.28
P-2	ND	15.0	-0.30	-0.01
P-3	ND	18.0	-0.30	0.06
P-4	ND	18.0	-0.30	0.08
P-5	ND	20.0	-0.30	0.05
P-6	ND	18.0	-0.30	0.12
P-7	ND	15.0	-0.30	0.03
P-8	ND	12.0	-0.30	0.02
P-9	ND	17.0	-0.30	0.18
P-10	ND	15.0	-0.30	0.02
P-11	ND	19.0	-0.30	0.05
P-12	ND	16.0	-0.30	0.07
P-13	ND	14.0	-0.30	0.10
P-13A	1.0	ND	-0.40	-0.01
P-13B	5.0	1.0	-0.40	-0.01
P-14	2.0	12.5	-0.30	0.02
P-15	1.0	14.0	-0.30	0.04
P-16	ND	16.0	-0.30	0.02
P-17	ND	8.0	-0.30	0.14
P-18	ND	15.0	-0.30	0.02
P-19	1.0	7.0	-0.32	-0.28
P-20	ND	16.0	-0.32	0.06
P-21	5.0	9.0	-0.32	-0.14
P-22	2.0	14.0	-0.32	-0.01
P-23	ND	14.0	-0.32	ND
P-24	11.0	4.0	-0.32	-0.18
P-25	10.0	6.0	-0.34	-0.26
P-26	4.0	16.0	-0.36	-0.18
P-27	ND	20.0	-0.34	ND
P-28	5.0	5.0	-0.34	-0.10
P-29	2.0	14.0	-0.30	-0.14
P-30	ND	19.0	-0.30	ND
P-31	2.0	16.0	-0.30	-0.04
P-32	1.0	18.0	-0.28	-0.12
P-33	ND	19.0	-0.28	-0.04
P-34	ND	19.0	-0.28	-0.02
P-35	1.0	17.0	-0.28	-0.14
P-36	1.0	18.0	-0.28	-0.10
P-37	ND	20.0	-0.28	0.02
P-38	ND	17.0	-0.28	0.02
P-39	ND	19.0	-0.28	0.04

TABLE 1. (continued)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)
W-1	21.0	ND	-0.40	-0.36
W-2	11.0	2.0	-0.40	-0.10
W-3	41.0	ND	-0.40	-0.40
W-4	29.0	ND	-0.36	-0.34
W-5	27.0	ND	-0.36	-0.30
W-6	21.0	ND	-0.36	-0.28
W-7	47.0	ND	-0.40	-0.32
W-8	10.0	2.0	-0.40	-0.04
W-9	20.0	ND	-0.56	-0.28
W-10	16.0	1.0	-0.62	-0.20
W-11	22.0	ND	-0.70	-0.28
W-12	21.0	2.0	-0.78	-0.64
W-13	16.0	1.0	-0.82	-0.20
W-14	16.0	ND	-1.00	0.10
W-15	3.0	18.0	-1.00	-0.92
W-16	30.0	ND	-1.20	-0.36
W-17	25.0	2.0	-1.20	-0.08
W-18	20.0	ND	-1.40	-0.18
W-19	22.0	ND	-1.70	-0.24
W-20	31.0	ND	-0.34	-0.30
W-21	29.0	ND	-0.34	-0.30
W-22	#	#	#	#
W-23	30.0	1.5	-0.34	-0.34
W-24	26.0	1.5	-16.0	-0.34
W-25	47.0	ND	-16.0	-7.0
W-26	##	##	##	##
W-27	26.0	1.5	-0.34	-0.34
W-28	30.0	ND	-17.5	-0.68
W-28A	31.0	ND	-16.0	-4.60
W-28B	26.0	ND	-16.0	-2.60
W-29	27.0	6.5	-17.5	-15.0
W-30	22.0	2.0	-16.0	-0.90
W-31	31.0	2.0	-16.0	-13.5
W-32	21.0	ND	-16.0	-0.85
W-33	31.0	5.0	-17.5	-12.0
W-36	36.0	0.5	-15.5	-7.00
W-37	39.0	0.5	-15.5	-15.0
W-38	23.0	3.5	-15.5	-12.5

=====

P-1 = Perimeter Extraction Well No. 1

W-1 = Interior Extraction Well No. 1

ND = None Detected

\* = Instrument: Gastech Model 1939-OX or Equal

\*\* = Instrument: Dwyer Magnehelic (measured in inches of water column)

# = Extraction Well destroyed or lost

## = Extraction Well Currently Under Repair

## SCS FIELD SERVICES

April 2, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of February 1 through 28, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion

of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Test results collected during the reporting period indicated that no measurable amounts of methane gas were detected in any monitoring well except at Monitoring Well No. 11B. Adjustments to the extraction wells adjacent to this monitoring well were implemented. In addition, adjustments to mainline flow control valves were implemented to provide additional header vacuum at the extraction wells in this area. By the end of the reporting period, methane gas levels at Monitoring Well No. 11B had dropped to none detected.

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Low levels of methane gas were detected beneath several storage containers; all other readings were none detected. Adjustments to extraction wells were implemented to clear this methane gas build-up. It is anticipated that these adjustments will be successful in controlling methane gas migration in these areas.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to

adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on February 13, 1991, SCS-FS conducted a temperature survey at each of the extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 61 to 152 degrees Fahrenheit (see Table 1). Although some of these temperatures are somewhat high for anaerobic decomposition, they do not necessarily indicate that subsurface combustion currently exists. However, SCS-FS recommends that all extraction wells that exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography. SCS-FS will test LFG temperatures at each extraction well on a quarterly basis to enable development of a data base. The next quarterly test is scheduled for May 1991. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

Utilizing drawings provided by Cal Mat and operational data collected over previous reporting periods, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey. (If a more complete "As-Built" drawing were available, a more extensive survey could be conducted. SCS-FS understands that Cal Mat staff is currently working to develop these "as built" drawings).

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During this and previous reporting periods, SCS-FS was informed by Cal Mat staff that the BFS had been experiencing periodic non-scheduled shut downs. Previous investigations by Cal Mat, SCS-FS, and representative of Klienfelder determined that the burner head flame arrestors were clogged and in need of cleaning. On February 1 and 11, 1991, SCS-FS, Cal Mat, and John Zinc (only February 11, 1991) staff steam cleaned the burner heads and flame arrestors. It appears this cleaning work has been partially successful in resolving the periodic shut down. Further cleaning activities are scheduled for the next reporting period.

In addition, on February 1, 1991, other non-routine maintenance items such as replacing primary blower with the back-up, repair of pilot assembly, etc. were conducted.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1572 degrees Fahrenheit.

The LFG flow recording device located within the Blower/Flare Station was observed to be malfunctioning. This device should be repaired as soon as possible. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After recent rains, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. Finally, vegetation overgrowth in the vicinity of the BFS was observed. SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks as well as removal of overgrowth vegetation.

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur

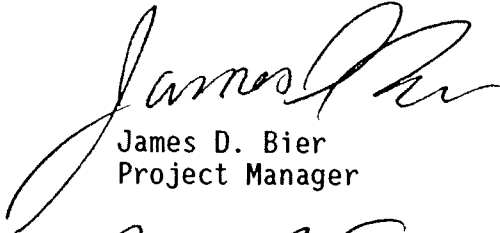
Mr. George Cosby  
April 2, 1991  
Page Five

subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

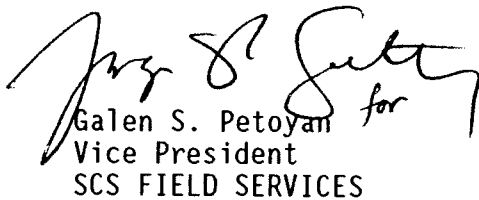
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan for  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1. RESULTS OF LANDFILL GAS EXTRACTION WELL TESTING AT THE  
FORMER HEWITT PIT LANDFILL, NORTH HOLLYWOOD, CALIFORNIA,  
PERIMETER AND INTERIOR SYSTEMS  
(February 13, 1991)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)	Temperature (degrees Fahrenheit)
P-1	ND	19.0	-0.36	-0.30	82
P-2	ND	18.0	-0.36	-0.02	72
P-3	ND	16.0	-0.36	-0.02	76
P-4	ND	20.0	-0.36	0.03	77
P-5	ND	20.0	-0.32	0.08	76
P-6	ND	17.0	-0.30	0.06	74
P-7	ND	15.0	-0.30	0.10	76
P-8	ND	12.0	-0.30	0.02	80
P-9	ND	19.0	-0.30	0.10	83
P-10	ND	19.0	-0.30	0.06	82
P-11	ND	16.0	-0.30	0.04	84
P-12	ND	15.0	-0.30	0.12	82
P-13	ND	15.0	-0.30	0.18	84
P-13A	1.0	3.0	-0.36	-0.02	71
P-13B	4.0	4.0	-0.36	-0.02	80
P-14	2.0	19.0	-0.30	0.10	80
P-15	1.0	14.0	-0.30	0.12	81
P-16	ND	14.0	-0.30	0.16	83
P-17	ND	5.0	-0.30	-0.30	76
P-18	ND	16.0	-0.30	0.10	80
P-19	ND	12.0	-0.30	-0.06	82
P-20	ND	20.0	-0.30	0.06	84
P-21	1.0	9.0	-0.30	-0.04	112
P-22	ND	17.0	-0.30	0.06	83
P-23	ND	18.0	-0.30	0.04	86
P-24	11.0	2.0	-0.30	-0.18	116
P-25	11.0	11.0	-0.32	-0.26	126*
P-26	5.0	16.0	-0.32	-0.16	114
P-27	ND	19.0	-0.34	0.02	84
P-28	5.0	7.0	-0.32	-0.06	139*
P-29	1.0	15.0	-0.30	-0.08	111
P-30	ND	19.0	-0.28	0.06	88
P-31	ND	17.0	-0.28	-0.01	90
P-32	1.0	18.0	-0.28	-0.08	92
P-33	ND	18.0	-0.28	0.04	91
P-34	ND	19.0	-0.28	0.04	94
P-35	1.0	18.0	-0.28	-0.08	104
P-36	ND	19.0	-0.30	-0.10	110
P-37	ND	21.0	-0.30	0.02	84
P-38	ND	17.0	-0.30	0.04	96
P-39	ND	21.0	-0.30	0.04	86

TABLE 1. (continued)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)	Temperature (degrees Fahrenheit)
W-1	17.0	ND	-0.32	-0.30	95
W-2	15.0	1.0	-0.32	-0.08	82
W-3	41.0	0.5	-0.32	-0.30	84
W-4	28.0	ND	-0.28	-0.20	111
W-5	25.0	ND	-0.28	-0.24	109
W-6	22.0	ND	-0.28	-0.20	77
W-7	50.0	ND	-0.28	-0.25	99
W-8	14.0	ND	-0.28	-0.04	91
W-9	25.0	ND	-0.32	-0.18	83
W-10	20.0	ND	-0.34	-0.08	91
W-11	22.0	ND	-0.40	-0.16	82
W-12	16.0	2.0	-0.48	-0.12	78
W-13	14.0	1.0	-0.52	-0.06	112
W-14	12.0	ND	-0.64	0.02	89
W-15	1.0	20.0	-0.68	-0.64	61
W-16	35.0	ND	-1.00	-0.20	112
W-17	31.0	ND	-1.00	ND	94
W-18	29.0	ND	-1.00	-0.04	83
W-19	##	##	##	##	##
W-20	27.0	2.0	-0.18	-0.18	92
W-21	31.0	1.0	-0.18	-0.18	112
W-22	#	#	#	#	#
W-23	16.0	12.0	-0.04	-0.04	93
W-24	21.0	5.0	-22.0	-0.38	84
W-25	51.0	1.0	-22.0	-5.50	128*
W-26	16.0	ND	-22.0	-0.62	119
W-27	52.0	ND	-0.04	-0.04	105
W-28	32.0	1.0	-22.0	-0.82	94
W-28A	32.0	2.0	-22.0	-7.60	136*
W-28B	25.0	4.0	-22.0	-3.00	152*
W-29	21.0	10.0	-22.0	-18.5	96
W-30	17.0	6.0	-21.0	-0.68	91
W-31	30.0	3.0	-21.0	-17.5	61
W-32	21.0	2.0	-21.0	-1.00	137*
W-33	24.0	8.0	-22.0	-12.5	103
W-36	34.0	2.0	-20.0	-8.00	114
W-37	38.0	0.5	-20.0	-18.0	110
W-38	22.0	3.0	-20.0	-13.5	128*

=====

P-1 = Perimeter Extraction Well No. 1

W-1 = Interior Extraction Well No. 1

ND = None Detected

\* = Instrument: Gastech Model 1939-OX or Equal

\*\* = Instrument: Dwyer Magnehelic (measured in inches of water column)

# = Extraction Well destroyed or lost

## = Extraction Well Currently Under Repair

## SCS FIELD SERVICES

April 25, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of March 1 through 31, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-0X Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Test results collected during the reporting period indicated that low levels of methane gas (below the LEL) were detected in several monitoring wells. Adjustments to the extraction wells adjacent to these monitoring wells were implemented. In addition, adjustments to mainline flow control valves were implemented to provide additional header vacuum at adjacent extraction wells. By the end of the reporting period, methane gas levels within all monitoring wells had dropped to none detected.

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Trace levels of methane gas were detected beneath several storage containers; all other readings were none detected. Adjustments to extraction wells were implemented to clear this methane gas build-up. It is anticipated that these adjustments will be successful in controlling methane gas migration in these areas.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

Mr. George Cosby  
April 25, 1991  
Page Three

In response to these overpull concerns, SCS-FS will test LFG temperatures at each extraction well on a quarterly basis to enable development of a data base. The next quarterly test is scheduled for May 1991. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

SCS-FS continues to recommend that all extraction wells that previously exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography.

Utilizing drawings provided by Cal Mat and operational data collected over previous reporting periods, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey. (If a more complete "As-Built" drawing were available, a more extensive survey could be conducted. SCS-FS understands that Cal Mat staff is currently working to develop these "as built" drawings).

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the previous reporting period, SCS-FS was informed by Cal Mat staff that the BFS had been experiencing periodic non-scheduled shut downs. Previous investigations by SCS-FS and others determined that the burner head flame arrestors were clogged and in need of cleaning. In February 1991, the burner heads and flame arrestors were steam cleaned. Further steam cleaning activities were conducted on March 7, 1991. It appears this work has been successful in resolving the periodic shut downs.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1570 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

Mr. George Cosby  
April 25, 1991  
Page Four

On March 27, 1991, the faulty flow control valve for Extraction Well No. 15 was replaced. In addition, the damage to Monitoring Well No. 35 was repaired.

Finally, during a routine visit on March 20, 1991, a complete blockage of the LFG collection header at the road crossing near the BFS was observed. This blockage was believed to be caused by a low spot in the header allowing condensate to collect. On March 21, 1991, this section of header was exposed, resloped, and vacuum restored throughout the entire collection system. As expected, a low spot in the header had formed due to differential settlement within the landfill.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After recent rains, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. Finally, vegetation overgrowth in the vicinity of the BFS was observed. SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks as well as removal of overgrowth vegetation.

#### Quarterly Site Observation

In accordance with the approved work scope, on March 26, 1991, SCS-FS conducted an intensive quarterly observation of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. Results of this observation indicated the system appeared to be operating satisfactorily.

Mr. George Cosby  
April 25, 1991  
Page Five

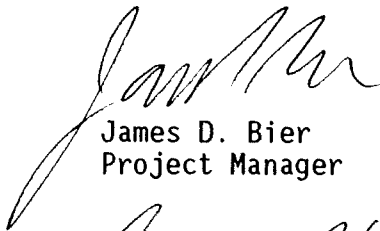
Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

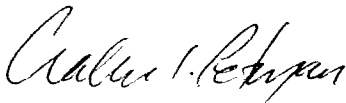
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

## SCS FIELD SERVICES

May 27, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the Former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of April 1 through 30, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

Mr. George Cosby  
May 27, 1991  
Page Two

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the reporting period indicated that low levels of methane gas (below the LEL) were detected in several monitoring wells. In addition to these low levels of methane gas, elevated levels (at or above the LEL) were detected at Monitoring Well Nos. 11B and 13D. Adjustments to the extraction wells adjacent to these monitoring wells and mainline flow control valves were implemented. By the end of the reporting period, methane gas levels within all monitoring wells had dropped to none detected.

After office staff reviewed the data on April 3, 1991, SCS-FS directed Cal Mat staff to implement further mainline flow control valve adjustments (e.g. increase header vacuum at the dog leg section of the LFG collection system). On April 10, 1991, SCS-FS field staff discovered the dog leg mainline control valve shut off. SCS-FS immediately opened this valve to a setting which would quickly reduce methane gas levels detected at Monitoring Well Nos. 11B and 13D. As previously stated, these adjustments were successful in clearing the methane gas detected.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat

offices/home, and other on-site office trailers. Trace levels of methane gas were detected beneath several storage containers; all other readings were none detected. Adjustments to extraction wells were implemented to clear this methane gas build-up.

#### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past sub-surface combustion.

In response to these overpull concerns, SCS-FS will test LFG temperatures at each extraction well on a quarterly basis to enable development of a data base. The next quarterly test is scheduled for May 1991. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

**SCS-FS continues to recommend that all extraction wells that previously exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography.**

#### Header Lines

Utilizing the recently completed drawings provided by Cal Mat and operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

On April 10, 1991, SCS-FS installed a permanent pressure gage on the discharge side of the LFG blower next to the flare arrestor. SCS-FS purchased (and stored in an on-site container) a second pressure gage and is awaiting direction from Cal Mat as to where it is to be installed.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The

Mr. George Cosby  
May 27, 1991  
Page Four

lowest recorded flare temperature observed for the month was 1573 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After recent rains, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. Finally, vegetation overgrowth in the vicinity of the BFS dog leg and between Monitoring Well Nos. 1 through 11 was observed. SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks as well as removal of overgrowth vegetation.

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

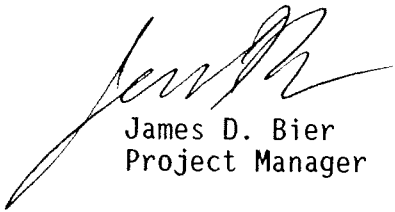
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it

Mr. George Cosby  
May 27, 1991  
Page Five

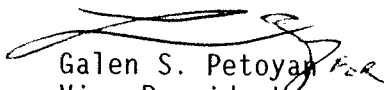
necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1. RESULTS OF LANDFILL GAS EXTRACTION WELL TESTING AT THE  
FORMER HEWITT PIT LANDFILL, NORTH HOLLYWOOD, CALIFORNIA,  
PERIMETER AND INTERIOR SYSTEMS  
(April 10, 1991)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)
P-1	ND	17.0	-0.34	-0.20
P-2	ND	12.0	-0.34	0.09
P-3	ND	15.0	-0.34	0.36
P-4	ND	17.0	-0.34	0.12
P-5	ND	16.0	-0.34	0.22
P-6	ND	18.0	-0.34	0.14
P-7	ND	14.0	-0.34	0.10
P-8	ND	10.0	-0.34	0.02
P-9	ND	12.0	-0.34	0.42
P-10	ND	13.5	-0.34	0.08
P-11	ND	15.0	-0.34	0.10
P-12	ND	16.0	-0.34	0.18
P-13	ND	13.5	-0.34	0.30
P-13A	ND	3.0	-0.34	-0.04
P-13B	10.0	ND	-0.34	-0.01
P-14	ND	12.0	-0.34	0.10
P-15	ND	11.0	-0.34	0.18
P-16	ND	14.0	-0.34	0.10
P-17	ND	7.0	-0.36	0.38
P-18	ND	12.0	-0.36	0.08
P-19	2.0	5.0	-0.36	-0.36
P-20	ND	16.0	-0.36	0.06
P-21	9.0	5.5	-0.36	-0.08
P-22	ND	11.0	-0.40	0.04
P-23	ND	4.5	-0.40	0.08
P-24	22.0	4.0	-0.40	-0.22
P-25	12.0	10.0	-0.42	-0.32
P-26	3.0	16.0	-0.42	-0.02
P-27	ND	20.0	-0.44	0.05
P-28	15.0	3.0	-0.42	-0.02
P-29	3.0	14.0	-0.38	-0.04
P-30	ND	15.5	-0.38	0.06
P-31	ND	15.0	-0.36	0.04
P-32	1.0	18.0	-0.36	-0.04
P-33	ND	20.0	-0.36	0.10
P-34	ND	20.0	-0.34	0.12
P-35	1.0	17.0	-0.34	-0.02
P-36	4.0	16.0	-0.34	-0.04
P-37	ND	20.0	-0.34	0.01
P-38	ND	16.0	-0.34	0.18
P-39	ND	17.5	-0.34	0.10

TABLE 1. (continued)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)
W-1	26.0	ND	-0.32	-0.26
W-2	22.0	ND	-0.32	-0.04
W-3	43.0	ND	-0.32	-0.30
W-4	40.0	ND	-0.32	-0.22
W-5	27.0	ND	-0.30	-0.04
W-6	33.0	ND	-0.30	-0.30
W-7	50.0	ND	-0.32	-0.24
W-8	25.0	2.0	-0.34	-0.12
W-9	32.0	ND	-0.38	-0.14
W-10	30.0	ND	-0.49	-0.02
W-11	35.0	ND	-0.52	-0.06
W-12	26.0	2.0	-0.64	-0.12
W-13	17.0	ND	-0.68	-0.04
W-14	15.0	ND	-0.74	-0.72
W-15	7.0	17.0	-0.82	-0.72
W-16	25.0	3.0	-3.20	-1.00
W-17	35.0	0.5	-3.20	-0.10
W-18	23.0	ND	-3.20	-0.50
W-19	##	##	##	##
W-20	39.0	ND	-0.40	-0.38
W-21	41.0	ND	-0.40	-0.40
W-22	#	#	#	#
W-23	10.0	15.0	-0.62	-0.62
W-24	31.0	1.0	-11.5	-0.20
W-25	60.0	ND	-11.5	-1.00
W-26	15.0	ND	-18.0	-0.95
W-27	60.0	ND	-0.62	-0.62
W-28	31.0	ND	-20.0	-0.75
W-28A	41.0	ND	-17.0	-4.00
W-28B	20.0	9.0	-17.0	-0.90
W-29	21.0	8.0	-19.0	-19.0
W-30	41.0	ND	-19.0	-0.10
W-31	33.0	2.0	-18.0	-15.0
W-32	25.0	0.5	-18.0	-0.50
W-33	20.0	5.0	-18.0	-15.0
W-36	24.0	1.0	-18.0	-8.00
W-37	28.0	2.0	-18.0	-17.0
W-38	18.0	4.0	-18.0	-17.0

=====

P-1 = Perimeter Extraction Well No. 1

W-1 = Interior Extraction Well No. 1

ND = None Detected

\* = Instrument: Gastech Model 1939-OX or Equal

\*\* = Instrument: Dwyer Magnehelic (measured in inches of water column)

# = Extraction Well destroyed or lost

## = Extraction Well Disconnected

## SCS FIELD SERVICES

June 24, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of May 1 through 31, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the reporting period indicated that no methane gas was detected in any monitoring well tested.

On May 15, 1991, Monitoring Well Nos. 29B and 29C were observed to be damaged by on-site heavy equipment during site grading activities (work conducted by others). During the reporting period, SCS-FS repaired these monitoring wells and follow-up testing indicated no methane gas present. In addition, on May 29, 1991, Monitoring Well Nos. 15A and 23 appeared to be plugged. As of the date of this report, these monitoring wells now appear to be unplugged and clear of methane gas.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. During the reporting period, trace levels of methane gas were detected beneath one storage container (E-24); all other readings were none detected. Adjustments to extraction wells were implemented to clear this methane gas build-up.

### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on May 8, 1991, SCS-FS conducted a temperature survey at each of the extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 69 to 138 degrees Fahrenheit (see Table 1). Although some of these temperatures are somewhat high for anaerobic decomposition, they do not necessarily indicate that subsurface combustion currently exists. **However, SCS-FS recommends that all extraction wells that exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography.** SCS-FS will test LFG temperatures at each extraction well on a quarterly basis to enable development of a data base. The next quarterly test is scheduled for August 1991. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

### Header Lines

Utilizing the recently completed drawings provided by Cal Mat and operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the previous reporting period, SCS-FS installed a permanent pressure gage on the discharge side of the LFG blower next to the flame arrestor. A second pressure gage was to be installed, however, at the direction of Cal Mat, SCS-FS has stored this gage on-site and will be utilized as a back-up.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The

Mr. George Cosby  
June 24, 1991  
Page Four

lowest recorded flare temperature observed for the month was 1571 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After recent rains, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. Finally, vegetation overgrowth in the vicinity of the dog leg area, between Monitoring Well Nos. 1 through 11, and around Monitoring Well Nos. 31 and 32 was observed. SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks as well as removal of overgrowth vegetation.

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

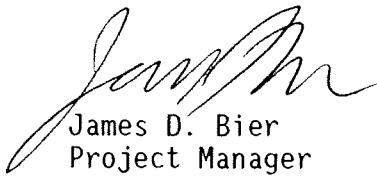
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it

Mr. George Cosby  
June 24, 1991  
Page Five

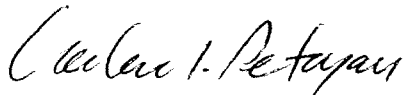
necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1. RESULTS OF LANDFILL GAS EXTRACTION WELL TESTING AT THE  
FORMER HEWITT PIT LANDFILL, NORTH HOLLYWOOD, CALIFORNIA,  
PERIMETER AND INTERIOR SYSTEMS  
(May 8, 1991)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)	Temperature (Degrees Fahrenheit)
P-1	ND	19.0	-0.20	-0.18	82
P-2	1.0	15.0	-0.20	-0.02	86
P-3	ND	20.0	-0.20	-0.06	78
P-4	ND	21.0	-0.20	-0.02	84
P-5	ND	21.0	-0.20	-0.01	90
P-6	ND	21.0	-0.20	ND	86
P-7	ND	16.0	-0.20	ND	87
P-8	ND	14.0	-0.20	ND	87
P-9	ND	21.0	-0.20	-0.02	84
P-10	1.0	17.0	-0.20	ND	85
P-11	ND	21.0	-0.20	ND	90
P-12	1.0	16.0	-0.20	ND	92
P-13	ND	21.0	-0.20	ND	85
P-13A	2.0	5.0	-0.20	-0.04	93
P-13B	1.0	18.0	-0.20	-0.04	89
P-14	1.0	12.0	-0.20	ND	86
P-15	ND	21.0	-0.20	ND	86
P-16	ND	19.0	-0.20	ND	88
P-17	2.0	16.0	-0.20	-0.14	82
P-18	ND	14.0	-0.20	ND	85
P-19	ND	9.0	-0.20	-0.02	91
P-20	ND	17.0	-0.20	ND	84
P-21	3.0	6.0	-0.20	-0.04	108
P-22	ND	21.0	-0.20	ND	82
P-23	ND	17.0	-0.22	ND	84
P-24	15.0	6.0	-0.22	-0.14	114
P-25	11.0	7.0	-0.22	-0.14	126
P-26	3.0	16.0	-0.22	-0.14	112
P-27	ND	20.0	-0.22	0.01	93
P-28	8.0	2.0	-0.20	-0.04	134
P-29	1.0	15.0	-0.20	-0.08	110
P-30	ND	20.0	-0.20	ND	92
P-31	ND	14.0	-0.20	ND	95
P-32	1.0	17.0	-0.20	-0.08	86
P-33	1.0	18.0	-0.20	ND	87
P-34	ND	19.0	-0.20	ND	82
P-35	1.0	18.0	-0.20	-0.04	98
P-36	1.0	17.0	-0.20	-0.08	109
P-37	ND	21.0	-0.20	ND	82
P-38	ND	20.0	-0.20	ND	85
P-39	ND	21.0	-0.20	-0.01	87

TABLE 1. (continued)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)	Temperature (Degrees Fahrenheit)
W-1	19.0	1.0	-0.26	-0.24	103
W-2	20.0	2.0	-0.26	-0.18	94
W-3	42.0	ND	-0.26	-0.26	82
W-4	39.0	ND	-0.24	-0.20	106
W-5	37.0	ND	-0.24	-0.04	86
W-6	27.0	ND	-0.22	-0.20	87
W-7	56.0	ND	-0.24	-0.22	91
W-8	20.0	ND	-0.24	-0.18	107
W-9	23.0	ND	-0.30	-0.14	92
W-10	24.0	ND	-0.36	-0.08	98
W-11	27.0	ND	-0.38	-0.10	81
W-12	24.0	ND	-0.42	-0.06	86
W-13	19.0	ND	-0.42	-0.06	102
W-14	18.0	ND	-0.42	-0.22	112
W-15	2.0	19.0	-0.44	-0.42	69
W-16	30.0	1.0	-0.94	-0.32	104
W-17	26.0	1.0	-0.94	-0.08	112
W-18	24.0	ND	-0.94	-0.14	103
W-19	##	##	##	##	##
W-20	24.0	1.0	-0.22	-0.22	108
W-21	29.0	2.0	-0.22	-0.22	84
W-22	#	#	#	#	#
W-23	11.0	10.0	-2.40	-0.32	89
W-24	26.0	2.0	-18.5	-0.08	82
W-25	31.0	6.0	-18.5	-7.50	126
W-26	16.0	3.0	-19.0	-0.92	103
W-27	41.0	ND	-2.40	-2.00	119
W-28	32.0	ND	-19.0	-0.72	87
W-28A	36.0	4.0	-18.5	-0.35	138
W-28B	28.0	ND	-18.5	-0.08	103
W-29	45.0	0.5	-19.0	-18.0	99
W-30	26.0	2.0	-20.0	-0.15	87
W-31	46.0	2.0	-20.0	-13.0	74
W-32	23.0	1.0	-20.0	-0.50	137
W-33	26.0	0.5	-19.0	-12.5	92
W-36	30.0	4.0	-18.0	-5.40	114
W-37	36.0	2.0	-18.0	-14.0	106
W-38	21.0	2.5	-18.0	-15.0	126

=====

P-1 = Perimeter Extraction Well No. 1

W-1 = Interior Extraction Well No. 1

ND = None Detected

\* = Instrument: Gastech Model 1939-0X or Equal

\*\* = Instrument: Dwyer Magnehelic (measured in inches of water column)

# = Extraction Well destroyed or lost

## = Extraction Well Disconnected

## SCS FIELD SERVICES

July 18, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of June 1 through 30, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

Mr. George Cosby  
July 18, 1991  
Page Two

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-0X Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the reporting period indicated that low levels of methane gas were detected in several monitoring wells. Adjustments to extraction wells adjacent to these monitoring wells were implemented and by the end of the reporting period, all methane gas levels had dropped to none detected.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. During the reporting period, no methane gas was detected beneath the storage containers. Settlement in the vicinity of Storage Container Nos. F19 - F57 and G1 - G23 was observed. Although this settlement does not appear to be adversely impacting system operation, Cal Mat may want to consider regrading of these areas.

### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull

Mr. George Cosby  
July 18, 1991  
Page Three

condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS will test LFG temperatures at each Extraction well on a quarterly basis to enable development of a data base. The next quarterly test is scheduled for July 1991. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

SCS-FS continues to recommend that all extraction wells that previously exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography.

#### Header Lines

Utilizing the recently completed drawings provided by Cal Mat and operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

On June 12, 1991, SCS-FS staff was notified by Cal Mat staff that the BFS was down and attempts to restart the system were unsuccessful. Troubleshooting conducted by Cal Mat and Klienfelder on June 12 and 13, 1991, determined that the flame sensing component of the fireguard unit had failed. A replacement sensing component was installed and the system was restarted without incident.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1577 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional with the exception noted above.

Mr. George Cosby  
July 18, 1991  
Page Four

However, it should be noted that the back pressure at the flare inlet has begun to increase since the burner head cleaning efforts completed in early March 1991 (i.e., back pressure increased from 8 to 10.5 inches of water column). Although this increase has not yet created operational problems, it should be monitored closely. SCS-FS will notify Cal Mat of any significant changes in this back pressure.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After recent rains, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. Finally, vegetation overgrowth in the vicinity of the dog leg area, between Monitoring Well Nos. 1 through 11, and around Monitoring Well Nos. 31 and 32 was observed. SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks as well as removal of overgrowth vegetation.

#### Standard Provisions

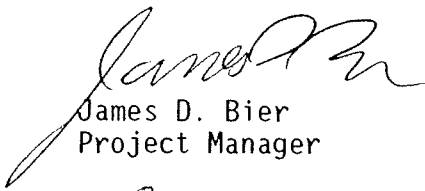
This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Mr. George Cosby  
July 18, 1991  
Page Five

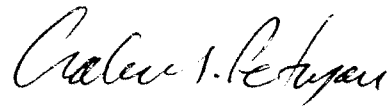
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1. RESULTS OF LANDFILL GAS EXTRACTION WELL TESTING AT THE  
FORMER HEWITT PIT LANDFILL, NORTH HOLLYWOOD, CALIFORNIA,  
PERIMETER AND INTERIOR SYSTEMS  
(June 5, 1991)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)
P-1	ND	18.0	-0.22	-0.17
P-2	ND	14.0	-0.22	-0.03
P-3	ND	19.0	-0.22	-0.12
P-4	ND	21.0	-0.22	-0.01
P-5	1.0	19.0	-0.22	-0.04
P-6	ND	21.0	-0.22	ND
P-7	1.0	16.0	-0.22	-0.01
P-8	ND	18.0	-0.22	-0.01
P-9	ND	19.0	-0.22	-0.08
P-10	ND	20.0	-0.22	ND
P-11	ND	19.0	-0.22	-0.01
P-12	2.0	18.0	-0.22	-0.04
P-13	ND	20.0	-0.22	-0.03
P-13A	1.0	4.5	-0.22	-0.02
P-13B	3.0	12.0	-0.22	-0.04
P-14	ND	17.0	-0.22	-0.01
P-15	ND	19.0	-0.22	-0.04
P-16	ND	20.0	-0.22	-0.02
P-17	ND	20.0	-0.22	-0.04
P-18	ND	17.0	-0.22	-0.01
P-19	ND	18.0	-0.22	-0.20
P-20	ND	21.0	-0.22	-0.01
P-21	4.0	8.0	-0.22	-0.10
P-22	ND	18.0	-0.22	-0.02
P-23	ND	21.0	-0.24	-0.02
P-24	14.0	8.0	-0.24	-0.12
P-25	12.0	8.0	-0.24	-0.18
P-26	4.0	15.0	-0.24	-0.14
P-27	ND	20.0	-0.24	-0.01
P-28	15.0	2.0	-0.22	-0.08
P-29	4.0	15.0	-0.22	-0.12
P-30	ND	18.0	-0.20	-0.04
P-31	6.0	12.0	-0.20	-0.02
P-32	5.0	15.0	-0.19	-0.06
P-33	ND	20.0	-0.19	-0.04
P-34	ND	19.0	-0.18	-0.02
P-35	4.0	16.0	-0.18	-0.09
P-36	3.0	17.0	-0.18	-0.12
P-37	ND	20.0	-0.18	-0.01
P-38	ND	20.0	-0.18	-0.04
P-39	ND	21.0	-0.18	-0.03

TABLE 1. (continued)

Extraction Well No.	Methane* (Percent by Volume)	Oxygen* (Percent by Volume)	Header Pressure** (In-W.C.)	Wellhead Pressure** (In-W.C.)
W-1	18.0	ND	-0.28	-0.24
W-2	16.0	ND	-0.26	-0.20
W-3	44.0	3.5	-0.26	-0.26
W-4	37.0	1.0	-0.26	-0.20
W-5	42.0	1.0	-0.26	-0.14
W-6	22.0	ND	-0.30	-0.26
W-7	56.0	ND	-0.36	-0.32
W-8	18.0	ND	-0.36	-0.20
W-9	25.0	1.0	-0.38	-0.16
W-10	24.0	ND	-0.42	-0.08
W-11	29.0	0.5	-0.48	-0.14
W-12	23.0	2.0	-0.54	-0.10
W-13	23.0	1.0	-0.54	-0.08
W-14	19.0	1.0	-0.56	-0.18
W-15	5.0	18.0	-0.58	-0.52
W-16	33.0	3.0	-0.86	-0.29
W-17	10.0	12.0	-0.86	-0.06
W-18	26.0	2.0	-0.86	-0.12
W-19	##	##	##	##
W-20	30.0	2.0	-0.22	-0.20
W-21	34.0	1.0	-0.22	-0.19
W-22	#	#	#	#
W-23	5.0	16.0	-3.00	-0.08
W-24	31.0	5.0	-18.5	-0.12
W-25	60.0	1.0	-18.5	-3.80
W-26	3.0	18.0	-19.0	-0.92
W-27	42.0	4.0	-3.00	-2.80
W-28	31.0	2.5	-19.0	-0.84
W-28A	48.0	1.0	-19.0	-3.40
W-28B	46.0	2.0	-19.0	-0.10
W-29	37.0	2.5	-19.0	-19.00
W-30	40.0	1.0	-17.5	-0.20
W-31	43.0	3.0	-17.5	-12.00
W-32	29.0	1.5	-17.5	-0.85
W-33	29.0	2.5	-19.0	-13.50
W-36	30.0	3.0	-19.0	-8.40
W-37	39.0	2.0	-19.0	-18.00
W-38	17.0	5.0	-19.0	-18.00

=====

P-1 = Perimeter Extraction Well No. 1

W-1 = Interior Extraction Well No. 1

ND = None Detected

\* = Instrument: Gastech Model 1939-OX or Equal

\*\* = Instrument: Dwyer Magnehelic (measured in inches of water column)

# = Extraction Well destroyed or lost

## = Extraction Well Disconnected

## SCS FIELD SERVICES

August 21, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of July 1 through 31, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

Mr. George Cosby  
August 21, 1991  
Page Two

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the reporting period indicated that low levels of methane gas were detected in several monitoring wells. Adjustments to extraction wells adjacent to these monitoring wells were implemented and by the end of the reporting period, all methane gas levels had dropped to none detected.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Test results indicated that no methane gas was detected beneath these on-site structures. During the reporting period, settled areas throughout the paved area were regraded and resurfaced by others.

### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same

Mr. George Cosby  
August 21, 1991  
Page Three

time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on July 10, 1991, SCS-FS conducted a temperature survey at each of the extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 69 to 146 degrees Fahrenheit (see Table 1). These temperatures are somewhat high for anaerobic decomposition and may indicate that subsurface combustion currently exists. **SCS-FS recommend that all extraction wells that exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography.**

In accordance with the new work scope, SCS-FS will test temperatures at each extraction well on a monthly basis to enable development of a data base. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

Finally, Extraction Well Nos. W-19 and W-21 are reported in Table 1 as in need of repair and missing, respectively. Extraction Well W-21 has been missing for an extended period of time and is assumed abandoned. SCS-FS does not recommend this well be replaced at this time. **However, SCS-FS recommends that Extraction Well No. W-19 be repaired.**

#### Header Lines

Utilizing the recently completed drawings provided by Cal Mat and operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1575 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

However, it should be noted that the back pressure at the flare inlet has begun to increase since the burner head cleaning efforts completed in early March 1991 (i.e., back pressure increased from 8 to 11.0 inches of

Mr. George Cosby  
August 21, 1991  
Page Four

water column). Although this increase has not yet created operational problems, it should be monitored closely. SCS-FS will notify Cal Mat of any significant changes in this back pressure.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After recent rains, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. During the reporting period, areas of vegetation overgrowth were cleared which restored easy access to LFG system components. **SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks.**

#### Quarterly Site Observation

In accordance with the approved work scope, on July 17, 1991, SCS-FS conducted an intensive quarterly observation of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed.

During the quarterly activities a 10 and 12 inch ITC flexhose was replaced along main LFG collection headers. In addition, the 4 inch Kanaflex for

Mr. George Cosby  
August 21, 1991  
Page Five

Extraction Well No. 29 was replaced. Finally, approximately 60 feet of 4 inch header pipe located on the northeast perimeter collection system, which was damaged by a surface fire, was replaced.


Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

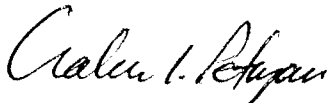
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1 HEWITT PIT EXTRACTION WELL DATA								SCS FIELD SERVICES
DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [scfm]	Remarks
07/10/91	P-1	ND	19.0	-0.26	-0.26	80	165	
07/10/91	P-2	ND	14.0	-0.26	-0.02	84	4	
07/10/91	P-3	ND	19	-0.26	-0.04	78	2.5	
07/10/91	P-4	ND	18.0	-0.26	-0.06	79	5	
07/10/91	P-5	ND	18.0	-0.26	-0.10	84	0.5	
07/10/91	P-6	ND	18.0	-0.26	-0.04	81	6	
07/10/91	P-7	ND	16.0	-0.26	-0.02	83	2.4	
07/10/91	P-8	ND	14.0	-0.26	-0.06	80	2.4	
07/10/91	P-9	ND	18.0	-0.26	-0.18	84	3	
07/10/91	P-10	ND	18.0	-0.26	-0.02	87	1.6	
07/10/91	P-11	ND	19.0	-0.26	-0.02	91	2.4	
07/10/91	P-12	ND	16.0	-0.26	-0.04	84	2.4	
07/10/91	P-13	ND	20.0	-0.26	-0.10	87	0.5	
07/10/91	P-13A	1.0	14.0	-0.26	-0.02	85	2	
07/10/91	P-13B	4.0	ND	-0.26	-0.06	86	1	
07/10/91	P-14	ND	17.0	-0.26	-0.01	90	1.6	
07/10/91	P-15	ND	19.0	-0.26	-0.06	88	1	
07/10/91	P-16	ND	20.0	-0.26	-0.02	88	2.4	
07/10/91	P-17	ND	20.0	-0.26	-0.16	90	1	
07/10/91	P-18	1.0	15.0	-0.26	-0.02	85	3.2	
07/10/91	P-19	ND	18.0	-0.26	-0.20	83	46.4	
07/10/91	P-20	ND	18.0	-0.26	-0.02	84	2.4	
07/10/91	P-21	2.0	8.0	-0.26	-0.10	98	6.4	
07/10/91	P-22	ND	20.0	-0.26	-0.02	89	1.6	
07/10/91	P-23	ND	19.0	-0.26	-0.02	86	2.4	
07/10/91	P-24	12.0	8.0	-0.26	-0.16	121	24.8	
07/10/91	P-25	11.0	7.0	-0.28	-0.16	133	17.6	
07/10/91	P-26	2.0	15.0	-0.28	-0.10	122	10	

ND = None Detected

TABLE 1 HEWITT PIT EXTRACTION WELL DATA								SCS FIELD SERVICES
DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [scfm]	Remarks
07/10/91	P-27	ND	18.0	-0.28	-0.01	101	0.80	
07/10/91	P-28	8.0	2.0	-0.26	-0.08	143	5.6	
07/10/91	P-29	2.0	12.0	-0.26	-0.10	123	7.2	
07/10/91	P-30	ND	11.0	-0.24	-0.02	94	1.6	
07/10/91	P-31	2.0	11.0	-0.24	-0.04	92	8	
07/10/91	P-32	ND	17.0	-0.24	-0.04	103	4.8	
07/10/91	P-33	ND	18.0	-0.24	-0.02	92	1.6	
07/10/91	P-34	ND	18.0	-0.24	ND	96	0.80	
07/10/91	P-35	ND	17.0	-0.24	-0.06	106	5.6	
07/10/91	P-36	ND	17.0	-0.24	-0.08	114	12	
07/10/91	P-37	ND	20.0	-0.24	0.01	97	0.80	
07/10/91	P-38	ND	17.0	-0.24	ND	104	0.80	
07/10/91	P-39	ND	20.0	-0.22	ND	100	0.80	
07/10/91	W-1	16.0	ND	-0.34	-0.34	107	57	
07/10/91	W-2	12.0	ND	-0.34	-0.22	92	78	
07/10/91	W-3	40.0	2.0	-0.34	-0.32	79	38	
07/10/91	W-4	26.0	2.0	-0.34	-0.30	103	14	
07/10/91	W-5	30.0	2.0	-0.34	-0.30	109	47	
07/10/91	W-6	20.0	ND	-0.36	-0.36	87	48	
07/10/91	W-7	50.0	1.0	-0.34	-0.32	85	25	
07/10/91	W-8	16.0	1.0	-0.34	-0.22	104	19	
07/10/91	W-9	23.0	1.0	-0.38	-0.20	83	61	
07/10/91	W-10	21.0	2.0	-0.42	-0.08	84	36	
07/10/91	W-11	22.0	1.0	-0.47	-0.14	82	11	
07/10/91	W-12	17.0	2.0	-0.54	-0.14	77	13	
07/10/91	W-13	21.0	1.0	-0.58	-0.06	82	10	
07/10/91	W-14	20.0	ND	-0.60	-0.18	96	38	
07/10/91	W-15	1.0	17.0	-0.64	-0.62	76	89	

ND = None Detected

TABLE 1 HEWITT PIT EXTRACTION WELL DATA								SCS FIELD SERVICES
DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [scfm]	Remarks
07/10/91	W-16	36.0	ND	-1.00	-0.34	80	78	
07/10/91	W-17	5.0	16.0	-1.00	-0.09	75	13	
07/10/91	W-18	25.0	0.5	-1.00	-0.20	93	25	
07/10/91	W-19							NEEDS REPAIR
07/10/91	W-20	31.0	1.0	-0.34	-0.32	70	23	
07/10/91	W-21	34.0	2.0	-0.34	-0.32	101	19	
07/10/91	W-22							MISSING
07/10/91	W-23	7.0	14.0	-3.40	-0.14	76	67	
07/10/91	W-24	34.0	1.0	-18.50	-0.18	71	70	
07/10/91	W-25	41.0	3.0	-18.50	-5.50	128	495	
07/10/91	W-26	15.0	4.0	-17.50	-1.00	124	27	
07/10/91	W-27	49.0	1.0	-3.40	-3.20	106	471	
07/10/91	W-28	30.0	2.0	-19.0	-0.80	91	131	
07/10/91	W-28A	27.0	7.0	-17.00	-3.80	139	308	
07/10/91	W-28B	26.0	1.0	-17.00	-0.48	146	114	
07/10/91	W-29	32.0	5.0	-17.00	-17.00	69	304	
07/10/91	W-30	29.0	1.0	-14.50	-0.25	79	25	
07/10/91	W-31	41.0	4.0	-14.50	-12.00	70	1600	CHECKED FLOW TWICE
07/10/91	W-32	21.0	1.0	-14.50	-0.90	127	248	
07/10/91	W-33	24.0	6.0	-19.00	-10.00	107	1349	CHECKED FLOW TWICE
07/10/91	W-36	29.0	3.0	-17.50	-6.60	123	428	
07/10/91	W-37	39.0	4.0	-17.50	-14.50	117	585	
07/10/91	W-38	18.0	4.5	-17.50	-17.00	134	1140	CHECKED FLOW TWICE

ND = None Detected

## SCS FIELD SERVICES

September 24, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the Former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of August 1 through 31, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-0X Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the reporting period indicated that no methane gas was detected in any of the monitoring wells with the exception of MW-11B (40 percent LEL detected on August 27, 1991). Adjustments to extraction wells adjacent to this monitoring well were implemented and methane gas levels are expected to drop to none detected during the next reporting period.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Test results indicated that no methane gas was detected beneath these on-site structures.

### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same

Mr. George Cosby  
September 24, 1991  
Page Three

time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on August 7, 1991, SCS-FS conducted a temperature survey at each of the extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 72 to 144 degrees Fahrenheit (see Table 1). These temperatures are somewhat high for anaerobic decomposition and may indicate that subsurface combustion currently exists. **SCS-FS recommend that all extraction wells that exhibited temperatures at or above 120 degrees Fahrenheit be tested for the presence of carbon monoxide via gas chromatography.**

In accordance with the new work scope, SCS-FS will test temperatures at each extraction well on a monthly basis to enable development of a data base. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

Finally, Extraction Well Nos. W-19 and W-22 are reported in Table 1 as missing, respectively. Extraction Well No. W-22 has been missing for an extended period of time and is assumed abandoned. Since Extraction Well No. 22 was not installed in the immediate vicinity of on-site structures and LFG off-site migration is controlled in this area, SCS-FS does not recommend this well be replaced at this time. **However, SCS-FS recommends that Extraction Well No. W-19 be reconnected.**

#### Header Lines

Utilizing the recently completed drawings provided by Cal Mat and operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1570 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

However, it should be noted that the back pressure at the flare inlet has begun to increase since the burner head cleaning efforts completed in early March 1991 (i.e., back pressure increased from 8 to 13 inches of water column). Although this increase has not yet created operational problems, it should be monitored closely. SCS-FS will notify Cal Mat of any significant changes in this back pressure.

On August 23, 1991, SCS-FS was notified by Cal Mat staff that a LFG extraction well had been damaged and caused the BFS to shut-down in response to high oxygen concentrations in the LFG. This same day, SCS-FS repaired the damaged extraction well and oxygen concentrations were returned to normal operating levels.

Throughout the reporting period, Cal Mat staff notified SCS-FS of periodic unscheduled shut-downs of the BFS. On August 27 and 28, 1991, SCS-FS with the assistance of Mr. Dick Processer conducted troubleshooting activities to resolve these shut-down problems. All electrical/mechanical components appeared to be operating properly. SCS-FS will continue to work with Mr. Processer and Cal Mat staff to resolve this problem.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required. Results of these observations indicated the system appeared to be in satisfactory operating condition.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After rains in March 91, areas of ponded water were observed in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and

Mr. George Cosby  
September 24, 1991  
Page Five

if neglected could eventually provide a pathway for air intrusion. During the reporting period, areas of vegetation overgrowth were cleared which restored easy access to LFG system components. **SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS, on a quarterly basis, conducts an intensive observation of the LFG collection system for cracks, breakage, wear of fittings, etc. . During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly observation is scheduled for October 1991.

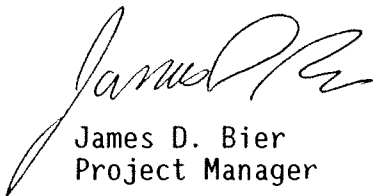
#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

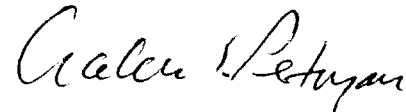
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
08/07/91	P-1	ND	18.0	ND	-0.16	-0.12	101	5.50	
08/07/91	P-2	ND	16.0	ND	-0.16	ND	111	0.80	
08/07/91	P-3	ND	21.0	ND	-0.16	ND	97	0.50	
08/07/91	P-4	ND	20.0	ND	-0.16	ND	101	0.80	
08/07/91	P-5	ND	21.0	ND	-0.16	ND	105	0.00	
08/07/91	P-6	ND	21.0	ND	-0.16	ND	115	0.00	
08/07/91	P-7	ND	16.0	ND	-0.16	ND	109	0.50	
08/07/91	P-8	ND	14.0	4.0	-0.16	ND	112.5	0.80	
08/07/91	P-9	ND	21.0	ND	-0.16	ND	111	0.00	
08/07/91	P-10	ND	20.0	ND	-0.16	ND	112	0.80	
08/07/91	P-11	ND	17.0	ND	-0.16	ND	106	0.00	
08/07/91	P-12	ND	16.0	ND	-0.16	ND	104	0.00	
08/07/91	P-13	ND	21.0	ND	-0.16	ND	108.5	0.00	
08/07/91	P-13A	ND	6.0	ND	-0.16	0.01	106	0.50	
08/07/91	P-13B	ND	20.0	ND	-0.16	0.01	107	0.00	
08/07/91	P-14	ND	15.0	ND	-0.16	ND	107	0.50	
08/07/91	P-15	ND	18.0	ND	-0.16	ND	106	0.00	
08/07/91	P-16	ND	18.0	ND	-0.16	ND	109	0.80	
08/07/91	P-17	ND	15.0	ND	-0.16	ND	114	0.00	
08/07/91	P-18	ND	14.0	2.0	-0.16	ND	112	0.80	
08/07/91	P-19	ND	5.0	10.0	-0.16	-0.16	105	4.80	
08/07/91	P-20	ND	15.0	ND	-0.16	ND	111.5	0.80	
08/07/91	P-21	2.0	7.0	8.0	-0.18	-0.08	116	3.20	
08/07/91	P-22	ND	18.0	ND	-0.18	ND	109	0.80	
08/07/91	P-23	ND	12.0	ND	-0.18	ND	116	0.00	
08/07/91	P-24	10.0	6.0	14.0	-0.18	-0.10	127	7.20	
08/07/91	P-25	8.0	6.0	12.0	-0.18	-0.14	133	16.80	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
cfm=Cubic feet per minute    in-W.C.=Inches of Water Column    NT=Not Taken  
P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
08/07/91	P-26	2.0	14.0	2.0	-0.20	-0.10	124	10.40	
08/07/91	P-27	ND	19.0	ND	-0.20	ND	101.5	0.00	
08/07/91	P-28	15.0	ND	18.0	-0.18	-0.04	143	4.80	
08/07/91	P-29	2.0	10.0	6.0	-0.18	-0.10	124	8.80	
08/07/91	P-30	ND	16.0	8.0	-0.16	-0.01	108	0.80	
08/07/91	P-31	2.0	12.0	6.0	-0.16	-0.10	121	1.60	
08/07/91	P-32	1.0	15.0	4.0	-0.16	-0.08	102	1.60	
08/07/91	P-33	ND	15.0	ND	-0.16	ND	105	0.80	
08/07/91	P-34	ND	18.0	ND	-0.16	ND	104.5	0.80	
08/07/91	P-35	ND	14.0	4.0	-0.16	-0.04	110	2.40	
08/07/91	P-36	ND	15.0	2.0	-0.16	-0.06	121	2.40	
08/07/91	P-37	ND	21.0	ND	-0.14	0.01	102	0.00	
08/07/91	P-38	ND	20.0	ND	-0.16	ND	108	0.00	
08/07/91	P-39	ND	20.0	ND	-0.16	ND	110	0.00	
08/07/91	W-1	17.0	ND	20.0	-0.38	-0.36	109	22.80	
08/07/91	W-2	5.0	12.0	2.0	-0.38	-0.10	110	30.40	
08/07/91	W-3	40.0	ND	34.0	-0.36	-0.36	97	42.40	
08/07/91	W-4	31.0	ND	26.0	-0.36	-0.32	105	28.80	
08/07/91	W-5	20.0	2.0	24.0	-0.36	-0.32	109	24.80	
08/07/91	W-6	18.0	ND	22.0	-0.38	-0.38	123	79.80	
08/07/91	W-7	50.0	ND	38.0	-0.38	-0.32	101	32.80	
08/07/91	W-8	15.0	ND	20.0	-0.38	-0.24	104	20.00	
08/07/91	W-9	22.0	ND	22.0	-0.42	-0.20	103.5	98.80	
08/07/91	W-10	25.0	1.0	24.0	-0.49	-0.10	106	9.50	
08/07/91	W-11	24.0	ND	24.0	-0.58	-0.14	103	11.40	
08/07/91	W-12	22.0	1.5	22.0	-0.66	-0.14	87	20.90	
08/07/91	W-13	20.0	ND	22.0	-0.70	-0.04	102	11.40	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
cfm=Cubic feet per minute      in-W.C.=Inches of Water Column      NT=Not Taken  
P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
08/07/91	W-14	18.0	1.0	20	-0.76	-0.04	134	9.50	
08/07/91	W-15	ND	20.0	ND	-0.70	-0.62	86	155.80	ADJUSTED TO -0.38
08/07/91	W-16	32.0	ND	28.0	-1.00	-0.32	111	39.90	
08/07/91	W-17	8.0	16.0	5.0	-1.00	-0.10	97	19.00	
08/07/91	W-18	19.0	2.5	24.0	-1.00	-0.18	115	45.60	
08/07/91	W-19							0.00	NEEDS TO BE RECONNECTED
08/07/91	W-20	31.0	ND	28.0	-0.24	-0.24	92	34.20	
08/07/91	W-21	36.0	ND	28.0	-0.24	-0.24	109	24.80	
08/07/91	W-22								ABANDONED
08/07/91	W-23	28.0	4.5	28.0	-2.20	-1.60	90	269.80	REPAIRED WELL HEAD
08/07/91	W-24	31.0	2.5	24.0	-18.0	-0.08	89	17.10	
08/07/91	W-25	44.0	2.0	38.0	-18.0	-5.80	121	211.20	
08/07/91	W-26	16.0	4.0	20.0	-18.0	-0.88	118	155.80	
08/07/91	W-27	45.0	ND	32.0	-2.20	-2.20	117	264.10	
08/07/91	W-28	37.0	1.0	30.0	-19.0	-0.70	95	79.80	
08/07/91	W-28A	41.0	ND	32.0	-18.0	-2.20	144	94.40	
08/07/91	W-28B	30.0	2.5	28.0	-18.0	-0.38	142	195.70	SLIGHT SURGE
08/07/91	W-29	24.0	6.0	16.0	-19.0	-16.0	73	543.40	
08/07/91	W-30	35.0	1.5	28.0	-15.0	-0.20	88	24.00	
08/07/91	W-31	41.0	2.5	26.0	-15.0	-12.0	72	160.00	
08/07/91	W-32	24.0	ND	24.0	-15.0	-1.10	141	91.20	
08/07/91	W-33	28.0	3.5	24.0	-19.0	-10.0	116	847.40	
08/07/91	W-36	33.0	2.0	28.0	-17.0	-6.80	121	678.30	
08/07/91	W-37	42.0	1.0	30.0	-17.0	-15.0	108	456.00	
08/07/91	W-38	26.0	-17.0	141	-12.5	26.0	141	1136.20	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
cfm=Cubic feet per minute    in-W.C.=Inches of Water Column    NT=Not Taken  
P-1=Per Extraction Well No. 1    W-1=Interior Extraction Well No. 1

## SCS FIELD SERVICES

October 28, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of September 1 through 30, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the reporting period indicated that no methane gas was detected in any of the monitoring wells with the exception of MW-11B (50 percent LEL detected on September 17 and 24, 1991). Adjustments to extraction wells adjacent to this monitoring well were implemented and as of the date of this report the methane gas levels have decreased to none detected.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Test results indicated that low levels of methane gas were detected beneath several storage containers. By the end of the reporting period, the levels of methane gas had decreased to none detected. Test results beneath all other structures indicated no methane gas detected.

### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull

Mr. George Cosby  
October 28, 1991  
Page Three

condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on September 4, 1991, SCS-FS conducted a temperature survey at each of the extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 73 to 144 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and may indicate that subsurface combustion currently exists. Laboratory analysis for the presence of carbon monoxide (an indicator of subsurface combustion) from several extraction wells exhibiting the highest temperatures have been forwarded to Cal Mat under a separate cover.

In accordance with the new work scope, SCS-FS will test temperatures at each extraction well on a monthly basis to enable development of a data base. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

Finally, Extraction Well Nos. W-19 and W-22 are reported in Table 1 as damaged and missing, respectively. Extraction Well No. W-22 has been missing for an extended period of time and is assumed abandoned. Since Extraction Well No. 22 was not installed in the immediate vicinity of on-site structures and LFG off-site migration is controlled in this area, SCS-FS does not recommend this well be replaced at this time. **However, SCS-FS recommends that Extraction Well No. W-19 be reconnected.**

#### Header Lines

Utilizing the recently completed drawings provided by Cal Mat and operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The

Mr. George Cosby  
October 28, 1991  
Page Four

lowest recorded flare temperature observed for the month was 1575 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

However, it should be noted that the back pressure at the flare inlet has begun to increase since the burner head cleaning efforts completed in early March 1991 (i.e., back pressure increased from 8 to 13.5 inches of water column). Although this increase has not yet created operational problems, it should be monitored closely. SCS-FS will notify Cal Mat of any significant changes in this back pressure.

Throughout the reporting period, Cal Mat staff notified SCS-FS of periodic unscheduled shut-downs of the BFS. SCS-FS with the assistance of Mr. Dick Processer conducted troubleshooting activities to resolve these shut-down problems. All electrical/mechanical components appeared to be operating properly. SCS-FS will continue to work with Mr. Processer and Cal Mat staff to resolve this problem.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required.

On September 27, 1991, SCS-FS replaced all visually worn two inch kanaflex hoses on the perimeter extraction well system. After this work was completed, the system appeared to be in satisfactory operating condition.

On September 30, 1991, Cal Mat staff indicated that a mainline flexhose had been found disconnected. Cal Mat staff reconnected the flexhose this same day and indicated the system appeared to be operating satisfactorily.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation. After rains in March 91, areas of ponded water were observed

Mr. George Cosby  
October 28, 1991  
Page Five

in the vicinity of Self-Storage Containers Nos. A-40, B-47, D-51, and E-19. Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could eventually provide a pathway for air intrusion. During the reporting period, areas of vegetation overgrowth were cleared which restored easy access to LFG system components. **SCS-FS recommends the above noted areas be graded to prevent ponding and seal surface cracks.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS, on a quarterly basis, conducts an intensive observation of the LFG collection system for cracks, breakage, wear of fittings, etc. . During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly observation is scheduled for October 1991.

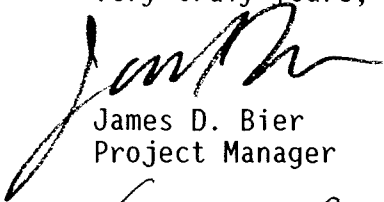
#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

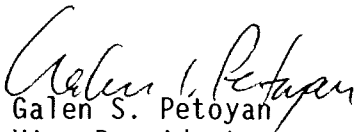
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
09/04/91	P-1	ND	16.0	ND	-0.20	-0.18	112	7.00	
09/04/91	P-2	ND	15.0	ND	-0.20	-0.02	114	1.60	
09/04/91	P-3	ND	18.0	ND	-0.20	0.04	99	0.50	
09/04/91	P-4	ND	18.0	ND	-0.20	0.06	101	0.00	
09/04/91	P-5	ND	18.0	ND	-0.20	0.10	108	0.00	
09/04/91	P-6	ND	18.0	ND	-0.20	0.06	116	0.00	
09/04/91	P-7	ND	15.0	ND	-0.20	0.06	107	0.00	
09/04/91	P-8	ND	14.0	6.0	-0.20	ND	114	0.80	
09/04/91	P-9	ND	10.0	ND	-0.20	0.12	112	0.00	
09/04/91	P-10	ND	15.0	ND	-0.20	0.04	114	0.00	
09/04/91	P-11	TR	16.0	ND	-0.20	0.04	107	0.00	
09/04/91	P-12	ND	16.0	ND	-0.20	0.08	101	0.00	
09/04/91	P-13	ND	18.0	ND	-0.20	0.02	107	0.00	
09/04/91	P-13A	ND	4.0	ND	-0.20	0.02	106	0.50	
09/04/91	P-13B	ND	19.0	ND	-0.20	0.04	104	0.00	
09/04/91	P-14	ND	16.0	ND	-0.20	ND	103	0.50	
09/04/91	P-15	ND	11.0	ND	-0.20	0.04	104	0.00	
09/04/91	P-16	ND	18.0	ND	-0.20	ND	106	0.80	
09/04/91	P-17	ND	16.0	ND	-0.20	0.04	117	0.00	
09/04/91	P-18	ND	15.0	2.0	-0.20	ND	114	0.00	
09/04/91	P-19	1.0	4.0	12.0	-0.20	-0.20	106	5.60	
09/04/91	P-20	ND	16.0	ND	-0.20	ND	114	0.00	
09/04/91	P-21	2.0	8.0	6.0	-0.20	-0.04	115	2.40	
09/04/91	P-22	TR	11.0	ND	-0.20	ND	108	0.80	
09/04/91	P-23	ND	12.0	ND	-0.22	ND	118	0.00	
09/04/91	P-24	15.0	6.0	16.0	-0.22	-0.10	129	8.80	
09/04/91	P-25	12.0	6.0	14.0	-0.24	-0.18	135	18.40	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
09/04/91	P-26	2.0	14.0	2.0	-0.24	-0.10	130	12.00	
09/04/91	P-27	1.0	16.0	ND	-0.24	ND	107	0.00	
09/04/91	P-28	18.0	ND	20.0	-0.24	-0.04	144	6.40	
09/04/91	P-29	2.0	14.0	8.0	-0.24	-0.10	128	9.60	
09/04/91	P-30	1.5	1.0	6.0	-0.20	ND	110	0.00	
09/04/91	P-31	2.0	11.0	6.0	-0.18	-0.08	119	6.40	
09/04/91	P-32	1.0	16.0	6.0	-0.18	-0.10	104	3.20	
09/04/91	P-33	ND	16.0	ND	-0.18	ND	107	0.80	
09/04/91	P-34	ND	16.0	ND	-0.18	ND	108	0.80	
09/04/91	P-35	TR	14.0	6.0	-0.18	-0.04	111	3.20	
09/04/91	P-36	ND	16.0	2.0	-0.18	-0.04	120	3.20	
09/04/91	P-37	ND	20.0	ND	-0.16	ND	104	0.00	
09/04/91	P-38	TR	17.0	ND	-0.16	0.02	110	0.00	
09/04/91	P-39	ND	20.0	ND	-0.16	0.02	112	0.00	
09/04/91	W-1	16.0	ND	20.0	-0.28	-0.22	123	11.40	
09/04/91	W-2	14.0	ND	12.0	-0.26	-0.12	104	17.10	
09/04/91	W-3	38.0	ND	30.0	-0.26	-0.26	103	56.00	
09/04/91	W-4	31.0	ND	24	-0.26	-0.26	112	12.80	
09/04/91	W-5	22.0	3.0	20	-00.26	-0.20	114	24.00	
09/04/91	W-6	18.0	ND	16.0	-0.26	-0.26	119	68.40	
09/04/91	W-7	47.0	ND	32.0	-0.28	-0.24	104	30.40	
09/04/91	W-8	18.0	ND	18.0	-0.28	-0.18	105	16.80	
09/04/91	W-9	24.0	ND	20.0	-0.30	-0.16	106	64.60	
09/04/91	W-10	23.0	ND	20.0	-0.32	-0.02	111	3.80	
09/04/91	W-11	26.0	ND	24.0	-0.36	-0.08	106	53.20	
09/04/91	W-12	25.0	ND	26.0	-0.42	-0.04	117	5.70	
09/04/91	W-13	19.0	ND	18.0	-0.44	-0.02	123	7.60	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
09/04/91	W-14	21.0	ND	18.0	-0.58	-0.02	138	9.50	
09/04/91	W-15	1.0	19.0	2.0	-0.60	-0.34	93	121.60	
09/04/91	W-16	31.0	1.0	30.0	-1.00	-0.26	107	89.30	
09/04/91	W-17	24.0	ND	22.0	-1.00	-0.31	138	108.30	
09/04/91	W-18	22.0	ND	20.0	-1.00	-0.16	121	51.30	
09/04/91	W-19	NT	NT	NT	NT	NT	NT	0.00	DAMAGED
09/04/91	W-20	37.0	1.0	30.0	-0.20	-0.20	87	108.30	
09/04/91	W-21	38.0	ND	30.0	-0.20	-0.20	112	48.80	
09/04/91	W-22	NT	NT	NT	NT	NT	NT	0.00	MISSING
09/04/91	W-23	32.0	4.0	28.0	-2.00	-2.00	92	262.20	
09/04/91	W-24	36.0	1.0	30.0	-18.00	-0.10	88	26.60	
09/04/91	W-25	43.0	2.5	36.0	-18.00	-6.40	121	494.40	
09/04/91	W-26	18.0	3.5	22.0	-17.00	-0.70	118	106.40	
09/04/91	W-27	44.0	ND	36.0	-2.00	-2.00	114	602.30	
09/04/91	W-28	31.0	ND	28.0	-18.00	-0.95	102	155.80	
09/04/91	W-28A	46.0	ND	34.0	-18.00	-1.80	137	311.20	
09/04/91	W-28B	36.0	1.0	28.0	-18.00	-0.38	138	267.90	
09/04/91	W-29	38.0	3.0	32.0	-18.00	-15.50	97	904.40	
09/04/91	W-30	45.0	ND	34.0	-19.00	-0.25	91	40.80	
09/04/91	W-31	33.0	3.0	28.0	-19.0	-15.0	73	1600.00	
09/04/91	W-32	24.0	ND	24.0	-19.0	-1.20	136	88.80	
09/04/91	W-33	29.0	4.5	24.0	-18.00	-11.00	116	739.10	
09/04/91	W-36	34.0	2.5	24.0	-17.00	-14.00	119	710.60	
09/04/91	W-37	43.0	1.5	32.0	-17.00	-6.20	107	3800.00	
09/04/91	W-38	28.0	1.0	26.0	-17.00	-14.00	140	1162.80	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perforation Extraction Well No. 1    W-1=Interior Extraction Well No. 1

## SCS FIELD SERVICES

November 20, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of October 1 through 31, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-0X Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the beginning of the reporting period indicated that methane gas was detected at several monitoring wells. It is believed the detected methane gas was the result of periodic shut-down problems experienced at the BFS. Repairs to the BFS were conducted on October 18, 1991, (see discussion below) and adjustments to extraction wells adjacent to these monitoring wells were implemented. By the end of the reporting period, the methane gas previously detected had decreased to none detected.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Test results indicated that methane gas was detected beneath several storage containers. Again, these methane gas readings are believed to be the result of problems experienced at the BFS. By the end of the reporting period, the levels of methane gas had decreased to none detected. Test results beneath all other structures indicated no methane gas detected.

### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull

Mr. George Cosby  
November 20, 1991  
Page Three

condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on October 10, 1991, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 61 to 141 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist. Laboratory analysis for the presence of carbon monoxide (an indicator of subsurface combustion) from several extraction wells exhibiting the highest temperatures have been forwarded to Cal Mat under a separate cover.

In accordance with the new work scope, SCS-FS will test temperatures at each extraction well on a monthly basis to enable development of a data base. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

Finally, Extraction Well No. W-19 is reported in Table 1 as disconnected. **SCS-FS recommends that Extraction Well No. W-19 be reconnected.**

#### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1575 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

Throughout the reporting period, Cal Mat staff notified SCS-FS of periodic unscheduled shut-downs of the BFS. SCS-FS with the assistance of Mr. Dick Processor conducted troubleshooting activities to resolve these shut-down problems. All electrical/mechanical components appeared to be operating properly. However, on October 18, 1991, Dick Processor replaced the fire eye sensing element and as of the date of this report, no further unscheduled shut-downs have been reported.

Due to increased back pressures at the flare inlet and operation problems described above, on October 15, 1991, SCS-FS cleaned the burner heads with a high pressure steam cleaner. This work did not significantly reduce the

Mr. George Cosby  
November 20, 1991  
Page Four

back pressure (currently at approximately 14 inches of water column). SCS-FS will continue to monitor the back pressure closely and notify Cal Mat of any significant changes.

#### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required.

Utilizing the recently completed drawings provided by Cal Mat and operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

On October 24, 1991, Cal Mat staff indicated that Extraction Well No. 29 had been damaged by on-going grading work. SCS-FS repaired this extraction well this same day. During this repair work, SCS-FS noticed signs of past and present subsurface combustion (e.g., discolored PVC pipe, elevated temperatures, etc.). In addition minimal vacuum was present at the wellhead. **SCS-FS recommends this lack of available vacuum be investigated.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could be providing a pathway for air intrusion. **SCS-FS recommends the above noted surface cracks be sealed.**

Mr. George Cosby  
November 20, 1991  
Page Five

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS, on a quarterly basis, conducts an intensive observation of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed.

On October 3, 1991, SCS-FS completed this quarterly site observation. During these activities, flange connections were tighten and loose flex hoses were realigned and tighten. All accessible LFG collection components appeared to be in satisfactorily operating condition. The next quarterly observation is scheduled for January 1992.

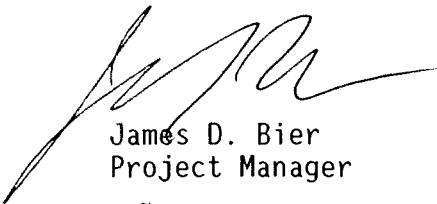
#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.


Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Report\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/10/91	P-1	ND	16.0	ND	-0.30	-0.30	94	8.00	
10/10/91	P-2	ND	14.0	ND	-0.30	0.02	86	0.00	
10/10/91	P-3	ND	19.0	ND	-0.30	0.12	85	0.00	
10/10/91	P-4	ND	19.0	ND	-0.30	0.06	96	0.00	
10/10/91	P-5	ND	20.0	ND	-0.30	0.04	102	0.00	
10/10/91	P-6	ND	19.0	ND	-0.30	0.06	99	0.00	
10/10/91	P-7	1.0	16.0	2.0	-0.30	0.04	93	0.00	
10/10/91	P-8	ND	10.0	4.0	-0.30	-0.01	101	0.80	
10/10/91	P-9	ND	20.0	ND	-0.30	0.12	103	0.00	
10/10/91	P-11	ND	16.0	ND	-0.30	0.06	95	0.00	
10/10/91	P-12	ND	16.0	ND	-0.30	0.08	93	0.00	
10/10/91	P-13	ND	15.0	ND	-0.30	0.14	98	0.00	
10/10/91	P-13A	4.0	3.0	10.0	-0.32	-0.04	103	1.00	
10/10/91	P-13B	ND	19.0	ND	-0.32	-0.01	104	0.00	
10/10/91	P-14	ND	15.0	ND	-0.30	0.04	105	0.00	
10/10/91	P-15	ND	12.0	4.0	-0.30	0.08	96	0.00	
10/10/91	P-16	ND	14.0	ND	-0.30	0.04	100	0.00	
10/10/91	P-17	ND	8.0	8.0	-0.30	0.08	99	0.00	
10/10/91	P-18	ND	14.0	ND	-0.30	0.04	101	0.00	
10/10/91	P-19	ND	7.0	6.0	-0.30	-0.30	104	8.80	
10/10/91	P-20	ND	14.0	ND	-0.30	0.02	111	0.00	
10/10/91	P-21	6.0	5.0	10.0	-0.30	-0.10	112	4.80	
10/10/91	P-22	ND	10.0	4.0	-0.30	0.04	106	0.00	
10/10/91	P-23	ND	4.0	8.0	-0.30	0.02	106	0.00	
10/10/91	P-24	15.0	2.0	121	-0.32	-0.18	120	20.80	
10/10/91	P-25	17.0	4.0	118	-0.32	-0.30	126	32.80	
10/10/91	P-26	ND	14	ND	-0.32	0.06	104	0.00	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/10/91	P-27	ND	11.0	ND	-0.32	0.04	107	0.00	
10/10/91	P-28	6.0	12.0	6.0	-0.30	-0.02	102	1.60	
10/10/91	P-29	6.0	6.0	12.0	-0.30	-0.12	111	11.20	
10/10/91	P-30	4.0	ND	16.0	-0.28	ND	96	1.60	
10/10/91	P-31	4.0	9.0	6.0	-0.28	-0.08	107	6.40	
10/10/91	P-32	1.0	14.0	2.0	-0.28	-0.10	106	4.00	
10/10/91	P-33	ND	18.0	ND	-0.28	0.06	111	0.00	
10/10/91	P-34	ND	17.0	ND	-0.28	0.04	104	0.00	
10/10/91	P-35	ND	20.0	2.0	-0.28	-0.06	106	4.80	
10/10/91	P-36	ND	12	ND	-0.28	-0.10	114	8.00	
10/10/91	P-37	ND	18.0	ND	-0.28	0.02	107	0.00	
10/10/91	P-38	ND	12.0	ND	-0.28	-0.10	114	0.00	
10/10/91	P-39	ND	15.0	ND	-0.28	0.04	108	0.00	
10/10/91	W-1	18.0	ND	20.0	-0.48	-0.40	110	26.60	
10/10/91	W-2	16.0	1.0	16.0	-0.48	-0.22	102	13.30	
10/10/91	W-3	38.0	1.0	30.0	-0.48	-0.44	85	71.20	
10/10/91	W-4	32.0	ND	28.0	-0.48	-0.44	107	21.60	
10/10/91	W-5	20.0	ND	22.0	-0.48	-0.04	96	8.80	
10/10/91	W-6	22.0	ND	24.0	-0.48	-0.44	98	96.90	
10/10/91	W-7	51.0	ND	34.0	-0.48	-0.42	86	46.40	
10/10/91	W-8	19.0	ND	20.0	-0.48	-0.36	101	24.80	
10/10/91	W-9	26.0	ND	24.0	-0.56	-0.24	89	87.40	
10/10/91	W-10	29.0	ND	26.0	-0.68	-0.08	96	30.40	
10/10/91	W-11	27.0	1.0	24.0	-0.74	-0.18	87	64.60	
10/10/91	W-12	32.0	ND	30.0	-0.84	-0.06	78	9.50	
10/10/91	W-13	20	ND	22.0	-0.88	-0.04	98	11.40	
10/10/91	W-14	22.0	1.0	24.0	-0.94	-0.04	99	9.50	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/10/91	W-15	5.0	16.0	4.0	-1.00	-0.50	84	155.80	
10/10/91	W-16	36.0	ND	26.0	-1.20	-0.36	102	121.60	
10/10/91	W-17	30.0	1.0	26.0	-1.20	-0.18	110	108.30	
10/10/91	W-18	29.0	ND	24.0	-1.20	-0.20	104	53.20	
10/10/91	W-19	NT	NT	NT	NT	NT	NT	NT	NOT CONNECTED
10/10/91	W-20	38.0	0.5	28.0	-0.32	-0.24	81	117.80	
10/10/91	W-21	39.0	1.0	28.0	-0.32	-0.32	105	58.40	
10/10/91	W-23	29.0	4.50	26.0	-4.80	-2.20	87	311.60	
10/10/91	W-24	40.0	ND	28.0	-20.00	-0.20	72	53.20	ADJUSTED TO -0.32
10/10/91	W-25	46.0	1.50	34.0	-20.00	-6.90	105	496.80	ADJUSTED TO -7.20
10/10/91	W-26	15.0	3.50	20.0	-20.00	-1.00	108	153.90	VALVE DIFFICULT TO ADJUST
10/10/91	W-27	46.0	ND	30.0	-4.80	-3.60	106	811.30	ADJUSTED TO -4.20
10/10/91	W-28	36.0	1.0	26.0	-23.00	-0.84	91	184.30	
10/10/91	W-28A	44.0	ND	32.0	-20.00	-4.00	130	302.40	ADJUSTED TO 4.60
10/10/91	W-28B	40.0	ND	28.0	-20.00	-0.44	118	296.40	ADJUSTED TO 0.52
10/10/91	W-29	37.0	2.5	28.0	-23.00	-16.00	102	860.70	
10/10/91	W-30	29.0	4.0	26.0	-17.50	-0.32	82	57.60	
10/10/91	W-31	36.0	3.5	28.0	-8.50	20.00	61	1600.00	HEAVY SURGING
10/10/91	W-32	26.0	1.5	24.0	-8.50	1.20	139	103.20	
10/10/91	W-33	28.0	4.0	24.0	-23.00	-11.00	101	752.40	
10/10/91	W-36	28.0	4.0	26.0	-20.00	-6.20	112	725.80	
10/10/91	W-37	36.0	2.0	30.0	-20.00	-19.00	104	3800.00	
10/10/91	W-38	26.0	2.5	24.0	-20.00	-16.00	141	1373.70	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

NOTICE OF INSPECTION  
DISPOSAL SITE

LOCAL ENFORCEMENT AGENCY: CITY OF LOS ANGELES

SWIS-09 (REV. 1/87)

BUREAU OF SANITATION

FACILITY FILE NUMBER COUNTY LEA NUMBER		PROGRAM CODE	INSPECTION DATE MO DAY YEAR	T-OUT T-IN	TOTAL TIME (DECIMAL HOURS)
19 - AR 1160		L	02-09-91 (1015)	1413 1215	(1031)
FACILITY NAME Cal-Mat Inert Landfill				RECEIVED BY:	
FACILITY LOCATION 9436 Glencaks Blvd. Sun Valley, CA 91352				Operator _____	
INSPECTOR W. GANDRIS				Owner _____	
ALSO PRESENT J. S. L. PUGH					

Comments:

<p>(3011) RECORDS <input checked="" type="checkbox"/> V <input checked="" type="checkbox"/> C</p> <p><input type="checkbox"/> ACCURATE WEIGHT/VOLUME RECORDS MAINTAINED 17636</p> <p><input type="checkbox"/> ADEQUATE SUBSURFACE RECORDS MAINTAINED 17637</p> <p><input type="checkbox"/> LOG OF SPECIAL OCCURRENCES MAINTAINED 17638</p> <p><input type="checkbox"/> RECORDS AVAILABLE FOR INSPECTION 17639</p>	<p>(3111) CONFINED UNLOADING <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> UNLOADING ADEQUATELY CONFINED 17675</p> <p>(3141) SPREADING/COMPACTING <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> SPREADING AND COMPACTING IN TWO-FOOT LAYERS 17677</p> <p>(3151) SLOPES/CUTS/GRADING <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> WORKING FACE SLOPES ALLOW EFFECTIVE COMPACTON. DEPTH OF CUTS AND SLOPES OF TRENCH SIDES AS APPROVED BY LEA 17678</p> <p><input type="checkbox"/> FINAL SLOPES HAVE NEAT APPEARANCE AND ARE 1-1/4 : 1 OR FLATTER 17679</p> <p><input type="checkbox"/> GRADING OF FILL SURFACES ADEQUATE 17679</p>	<p>(3191) FIRE <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> FIRE CONTROL ADEQUATE 17703</p> <p>(3192) FIRE (P) <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> BURNING MATERIALS SPREAD AND EXTINGUISHED. LEA, SWMR NOTIFIED IMMEDIATELY OF FIRE NOT EXTINGUISHED IN 24 HOURS 17683</p> <p>(3201) LEACHATE <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> ADEQUATE STEPS TAKEN TO MONITOR, COLLECT, TREAT, AND DISPOSE OF LEACHATES 17704</p> <p><input type="checkbox"/> NO WASTES IN DIRECT CONTACT WITH WATER EXCEPT AS APPROVED BY RWQCB 17709</p> <p>(3202) MOISTURE (P) <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> REFUSE COVERED WITH NEXT DAY'S REFUSE OR WITH SIX INCHES OF COMPACTED SOIL. TOTAL AREA OF EXPOSED REFUSE IS AS SPECIFIED FOR WET AND DRY SEASONS 17682</p> <p>(3211) GAS <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> GAS MONITORING AND CONTROL AS REQUIRED 17705</p> <p>(3221) DUST <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> DUST CONTROL ADEQUATE 17706</p> <p>(3231) VECTORS/BIRDS <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> VECTOR AND BIRD CONTROL ADEQUATE 17707</p> <p><input type="checkbox"/> LIQUID PONDS MINIMIZE VECTOR PROPAGATION 17715</p> <p>(3232) VECTORS (P) <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> THRESHOLD VALUES FOR VECTOR POPULATIONS NOT EXCEEDED 17683</p> <p>(3241) EROSION/ DRAINAGE <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> DRAINAGE AND EROSION CONTROL ADEQUATE 17708</p> <p>(3251) LITTER <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> LITTER CONTROL ADEQUATE 17711</p> <p>(3252) LITTER (P) <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> LITTER NOT ALLOWED TO MIGRATE OFF-SITE 17681</p> <p>(3261) NOISE <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> NOISE CONTROL ADEQUATE 17712</p> <p>(3271) ODOR <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> ODOR CONTROL ADEQUATE 17713</p> <p>(3272) ODOR (P) <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> AMBIENT AIR AT OR BEYOND FACILITY BOUNDARY IS NOT ODOROUS 17683</p>	<p>(3281) TRAFFIC <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> TRAFFIC CONTROL ADEQUATE WITHIN SITE. TRAFFIC MINIMIZES INTERFERENCE, SAFETY PROBLEMS, AND STACKING ON PUBLIC ROADS 17714</p> <p>(3291) EQUIPMENT <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> EQUIPMENT ADEQUATE IN TYPE, CAPACITY, AND NUMBER AND IS ADEQUATELY MAINTAINED 17720</p> <p><input type="checkbox"/> STANDBY EQUIPMENT AVAILABLE TO COMPLY WITH REG. 17682 AND OTHER SECTIONS 17727</p> <p>(3301) MAINTENANCE <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> EFFECTIVE MAINTENANCE PROCEDURES AND PROGRAMS DEVELOPED AND UTILIZED 17731</p> <p><input type="checkbox"/> ADEQUATE MONITORING AND REPAIR OF DETERIORATED CONDITIONS 17732</p> <p>(3311) CLOSURE <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> AFTER CLOSURE, IF LEACHATE, EXTENSIVE SURFACE CRACKING OR SETTLEMENT OCCURS, THE OWNER SHALL NOTIFY LEA AND SHALL MONITOR AND REPAIR SITE FOR A PERIOD OF YEARS OR LONGER 17734</p> <p><input type="checkbox"/> UPON SITE CLOSURE, DETAILED DESCRIPTION MUST BE FILED WITH THE LEA AND WITH THE COUNTY RECORDER 17735</p> <p>(3321) SPECIAL WASTES <input type="checkbox"/> V <input type="checkbox"/> C</p> <p><input type="checkbox"/> BURNING WASTES IMMEDIATELY SPREAD AND EXTINGUISHED IN SAFE AREA 17741</p> <p><input type="checkbox"/> SITE ACCEPTS ONLY APPROVED HAZARDOUS WASTES AND TAKES PRECAUTIONS TO ELIMINATE OR CONTROL HARMFUL GUSTS, FUMES, MISTS, VAPORS, OR GASES 17742</p> <p><input type="checkbox"/> LIQUID WASTES APPROVED BY RWQCB, LOCAL HEALTH ENTITY AND LEA 17743</p> <p><input type="checkbox"/> DEAD ANIMALS ALLOWED BY LOCAL REGULATIONS 17744</p> <p>(3331) OTHER <input type="checkbox"/> V <input type="checkbox"/> C</p>
---	---	---	---

\*V = Violation  
C = Compliance

STRIKOUTION: WHITE - CWMB YELLOW - OPERATOR PINK - LEA

## SCS FIELD SERVICES

December 27, 1991  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas  
(LFG) Migration Control Facilities at the Former Hewitt Pit  
Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of November 1 through 30, 1991.

### Conclusion

As of the date of this report, the collection system appears to be operating satisfactorily and meeting the operational criteria. **Recommendations regarding repair or maintenance activities are contained in subsequent sections of this report.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location. Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (also note that a copy of the results were left with on-site Cal Mat staff).

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction flow rate of a particular extraction well exceeds that of the LFG generation flow rate within the radius of influence of the well. During this overpull condition, air can be drawn through the ground surface to the extraction well and then finally injected into the flare. If this condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

### Monitoring Wells

Test results collected during the reporting period indicated that no methane gas was detected in any of the monitoring wells with the exception of MW-11B (50 percent LEL detected on November 26, 1991). Adjustments to extraction wells adjacent to this monitoring well were implemented and as of the date of this report, the methane gas at this monitoring well has decreased to none detected.

### Storage Containers/Offices

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers. Test results indicated that methane gas levels below the LEL (up to 80 percent LEL at one storage container) were detected beneath several storage containers. Cal Mat was notified of the methane gas levels detected and SCS-FS will continue to monitor these areas closely and make recommendations as needed. Test results beneath all other structures indicated no methane gas detected.

Mr. George Cosby  
December 27, 1991  
Page Three

### Extraction Wells

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, on November 7, 1991, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 67 to 139 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

In accordance with the new work scope, SCS-FS will test temperatures at each extraction well on a monthly basis to enable development of a data base. This additional information should provide a better understanding of conditions with respect to subsurface combustion at the site.

Finally, Extraction Well No. W-19 is reported in Table 1 as disconnected. SCS-FS recommends that Extraction Well No. W-19 be reconnected as soon as possible.

### LFG Blower/Flare Station

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1575 degrees Fahrenheit. All other operating parameters remained within the prescribed limits, and all mechanical and electrical components remained functional.

### LFG Control System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring well covers remain secure, and condensate traps remain functional. Minor repairs were completed as required.

Utilizing the recently completed drawings provided by Cal Mat and the operational data collected, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that no major restrictions existed within the portions of the system that were accessible for survey.

In response to concerns about loss of vacuum at Extraction Well No. W-29 (discovered during repairs conducted during the previous reporting period), SCS-FS installed a new above grade header line to this well. After this header was installed, adequate vacuum was recorded at this extraction well. Included in this work was the installation of the flow control valve and protective vault at the wellhead. Attempts to locate the wellhead for Extraction Well No. W-29A, which is also connected to the new above grade header, were unsuccessful. Therefore, a flow control valve to individually adjust flow from Extraction Well No. W-29A was installed directly upstream of Extraction Well No. W-29. This will allow flow (and monitoring) adjustments to be performed independently at each extraction well.

Finally, the drain lines for the condensate trap located near Extraction Well No. W-33 were excavated and regraded to allow condensate to properly drain. During this work, a large amount of condensate was drained from the header system.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, and although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Additionally, numerous small cracks observed along the site perimeter (especially between MW-3B through MW-7; and Perimeter Extraction Well Nos. P5 and 20 through 39), have worsened since previous reporting periods and if neglected could be providing a pathway for air intrusion. SCS-FS recommends the above noted surface cracks be sealed.

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
11/06/91	P-20	ND	15.0	ND	-0.40	0.04	91	0	
11/06/91	P-1	ND	16.0	ND	-0.40	-0.38	81	14	
11/06/91	P-2	ND	14.0	ND	-0.40	-00.02	76	5.6	
11/06/91	P-3	ND	19.0	ND	-0.40	-0.10	81	2.5	
11/06/91	P-4	ND	19.0	ND	-0.40	ND	82	0	
11/06/91	P-5	ND	20.0	ND	-0.40	-0.02	87	.5	
11/06/91	P-6	ND	20.0	ND	-0.40	ND	86	0	
11/06/91	P-7	ND	14.00	ND	-0.40	-0.01	88	2	
11/06/91	P-8	ND	14.0	ND	-0.40	-0.02	92	.8	
11/06/91	P-9	ND	18.0	ND	-0.40	-0.08	94	3.5	
11/06/91	P-10	ND	19.0	ND	-0.40	ND	96	0	
11/06/91	P-11	ND	17.0	ND	-0.40	ND	98	.8	
11/06/91	P-12	ND	15.0	ND	-0.40	ND	94	0	
11/06/91	P-13	ND	20.0	ND	-0.40	ND	97	0	
11/06/91	P-13A	1.0	3.0	6.0	-0.40	-0.02	91	1	
11/06/91	P-13B	ND	15.0	ND	-0.40	ND	88	0	
11/06/91	P-14	ND	17.0	ND	-0.40	0.02	98	.5	
11/06/91	P-15	ND	18.0	ND	-0.40	ND	97	0	
11/06/91	P-16	ND	20.0	ND	-0.40	0.02	92	3.2	
11/06/91	P-17	ND	20.0	ND	-0.40	-0.06	99	1	
11/06/91	P-18	ND	15.0	ND	-0.40	0.04	91	2.4	
11/06/91	P-19	ND	9.0	8.0	-0.40	-0.34	94	21.6	
11/06/91	P-21	3.0	6.0	6.0	-0.40	-0.10	98	8.8	
11/06/91	P-22	ND	17.0	ND	-0.40	0.04	95	1.6	
11/06/91	P-23	ND	15.0	ND	-0.40	0.02	93	0	
11/06/91	P-24	11.0	6.0	12.0	-0.40	-0.18	121	14.4	
11/06/91	P-25	9.0	10.0	8.0	-0.44	-0.28	126	12.8	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

*align  
dec pts.*

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
11/06/91	P-26	ND	20.0	ND	-0.44	ND	88	1.6	
11/06/91	P-27	ND	12.0	ND	-0.44	ND	93	0	
11/06/91	P-28	ND	12.0	ND	-0.40	-0.01	87	1.6	
11/06/91	P-29	ND	11.0	4.0	-0.38	-0.16	118	16.8	
11/06/91	P-30	ND	6.0	10.0	-0.38	ND	93	.8	
11/06/91	P-31	3.0	11.0	8.0	-0.38	-0.06	105	5.6	
11/06/91	P-32	ND	16.0	4.0	-0.38	-0.08	107	3.2	
11/06/91	P-33	ND	19.0	ND	-0.36	ND	96	0	
11/06/91	P-34	ND	18.0	ND	-0.36	0.02	98	0	
11/06/91	P-35	ND	17.0	ND	-0.36	-0.10	103	9.6	
11/06/91	P-36	ND	14.0	ND	-0.36	-0.16	108	13.6	
11/06/91	P-37	ND	20.0	ND	-0.36	-0.04	87	0	
11/06/91	P-38	ND	17.0	ND	-0.36	ND	95	.8	
11/06/91	P-39	ND	20.0	ND	-0.36	ND	89	0	
11/06/91	W-1	12.0	1.0	20.0	-0.46	-0.46	104	125.4	
11/06/91	W-2	3.0	14.0	4.0	-0.46	-0.30	92	106.4	ADJUSTED TO -0.15
11/06/91	W-3	37.0	ND	30.0	-0.46	-0.46	82	56.8	
11/06/91	W-4	27	ND	24.0	-0.46	-0.36	98	56.8	
11/06/91	W-5	32.0	2.5	24.0	-0.46	-0.06	81	5.6	
11/06/91	W-6	15.0	1.0	14.0	-0.46	-0.30	92	74.1	
11/06/91	W-7	47.0	ND	32.0	-0.48	-0.40	85	34.4	
11/06/91	W-8	12.0	ND	16.0	-0.50	-0.28	97	11.2	
11/06/91	W-9	14.0	2.0	20.0	-0.52	-0.24	83	102.6	
11/06/91	W-10	18.0	1.0	20.0	-0.58	-0.10	83	26.6	
11/06/91	W-11	21.0	ND	20.0	-0.60	-0.16	86	30.4	
11/06/91	W-12	10.0	4.0	14.0	-0.68	-0.04	76	20.9	
11/06/91	W-13	22.0	ND	22.0	-0.71	-0.06	83	24.7	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [vol]	Oxygen [vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
11/06/91	W-14	16.0	1.0	18.0	-0.80	-0.06	98	22.8	
11/06/91	W-15	2.0	19.0	2.0	-0.84	-0.32	68	83.6	
11/06/91	W-16	28.0	ND	26.0	-0.94	-0.28	102	81.7	
11/06/91	W-17	20.0	3.0	22.0	-0.94	-0.12	103	26.6	
11/06/91	W-18	20.0	2.5	24.0	-0.94	-0.30	98	91.2	
11/06/91	W-19	NT	NT	NT	NT	NT	NT	0	DISCONNECTED, NEEDS REPAIR
11/06/91	W-20	25.0	3.5	24.0	-0.26	-0.20	110	70.3	
11/06/91	W-21	26.0	1.5	26.0	-0.26	-0.18	88	24.8	
11/06/91	W-22	NT	NT	NT	NT	NT	NT	0	
11/06/91	W-23	23.0	3.5	28.0	-5.80	-1.80	77	193.8	
11/06/91	W-24	18.0	5.0	20.0	-27.00	-0.20	67	62.7	CAN'T ADJUST; VALVE CLOSED
11/06/91	W-25	40.0	3.0	32.0	-27.00	-10.00	106	349.6	ADJUSTED TO -8.0
11/06/91	W-26	9.0	3.0	14.0	NT	-1.00	103	235.6	CAN'T ADJUST
11/06/91	W-27	47.0	ND	34.0	-5.80	-4.60	107	777.1	ADJUSTED TO -5.0
11/06/91	W-28	27.0	5.5	26.0	-28.00	-1.00	1	70.3	ADJUSTED TO -0.86
11/06/91	W-28A	31.0	5.0	22.0	-27.00	-5.80	129	329.6	ADJUSTED TO -3.0
11/06/91	W-28B	21.0	4.5	20.0	-27.0	-0.60	124	188.1	
11/06/91	W-29	7.0	14.0	10.0	-28.00	-26.00	71	887.3	
11/06/91	W-30	20.0	2.5	20.0	-27.50	-0.35	67	36.8	
11/06/91	W-31	33.0	3.0	26.0	-27.50	-15.00	69	454.4	
11/06/91	W-32	17.0	4.0	18.0	-27.50	-2.00	139	272.8	
11/06/91	W-33	21.0	5.0	20.0	-28.00	-15.50	106	406.6	
11/06/91	W-36	24.0	3.0	24.0	-26.00	-9.80	112	585.2	
11/06/91	W-37	32.0	2.0	30.0	-26.00	-23.00	99	3800	VELOCITY OVER 20,000
11/06/91	W-38	19.0	5.0	18.0	-26.00	-23.50	137	813.2	SURGING

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1





**South Coast  
AIR QUALITY MANAGEMENT DISTRICT**

21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

GEORGE CROSBY  
OR AIR QUALITY COMPLIANCE COORDINATOR  
CALMAT PROPERTIES CO.  
3200 SAN FERNANDO RD  
LOS ANGELES, CA 90065

January 4, 1993

Equipment Location: 7245 LAUREL CANYON BL  
NORTH HOLLYWOOD, CA 91605

Ladies/Gentlemen:

**INFORMATION ON REPORTING OF ANNUAL AIR  
EMISSIONS FOR CALENDAR YEAR 1992**

The South Coast Air Quality Management District requires companies to pay annual fees based on the emission of air contaminants, as stated in Rule 301(e). The emission fee is authorized by the Lewis-Presley Air Quality Management Act.

The enclosed forms must be used for calculating and reporting your emissions for calendar year 1992. The enclosed instruction booklet explains how to use the forms to provide emission data and describes the changes from last year. You are required to provide throughput and emission factor information from your operations. The District will use this data to calculate emissions and the associated fees. An invoice for the correct amount of fees will be forthcoming. Even if no fee is due, you must complete and return the forms to the District, as this is used to update the region's emission inventory. If you need help, please call the District's emission fees appointment line at (909) 396-3660 to set up an appointment. One of the engineers will assist you in completing the report step by step.

District Rule 301 requires that completed emission forms be received in this office by February 15, 1993. If your forms are not received by that date, your permits may be suspended.

Thank you for your cooperation.

Very truly yours,

J. Christopher Marlia  
Program Supervisor

Enclosures  
Emissions Reporting Forms Package

PLEASE PRINT YOUR UPPER-CASE LETTERS &amp; NUMBERS NEATLY LIKE THIS:

A B C D E 1 2 3 4 5

FACILITY I.D. NUMBER

0 0 3 5 3

Submittal Date: February 15, 1993

CALMAT PROPERTIES CO.

CALMAT PROPERTIES CO.

3200 SAN FERNANDO RD

7245 LAUREL CANYON BL

LOS ANGELES

CA 90065

NORTH HOLLYWOOD

If your MAILING address is different from the one shown above, please make the changes below:

Address

City

State

Zip Code

Phone Number

2 1 3 2 5 8 2 7 7 7

Hours/Day

Days/Week

Weeks/Year

Business Operating Hours:

2 4

7

5 2

I declare under penalty of perjury that the data submitted truly represents throughput and emissions for the Calendar Year 1992, and that, when used, District emission factors represent the best available data for my company in the calculation of annual emission figures.

Authorized Signature:

Date: Feb 11

Name:

Title: Vice President

Telephone Number: (213) 258-2777

EXT: 3227

Preparer, if other than above:

Signature:

R. Prosser

Date: February 9, 1993

Name:

Richard Prosser

Title: Consultant

Organization: Gas Control Engineering, Inc.

Telephone Number: ( 714 ) 993 - 7837

EXT:

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C

## SUMMARY OF EMISSIONS AND DETERMINATION OF FEES FOR PLANT PREMISES FOR CALENDAR YEAR 1987

VALLEY RECLAMATION CO 7245 LAUREL CANYON BLVD NORTH HOLLYWOOD ID NUMBER: 03531-88	<b>FOR SCAQMD USE ONLY</b>		
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">REVIEWED BY:</td> <td style="width: 50%; padding: 5px;">ENTERED:</td> </tr> </table>	REVIEWED BY:	ENTERED:
REVIEWED BY:	ENTERED:		

**INSTRUCTION:** TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS PROVIDED ON "GENERAL INSTRUCTION" SHEET.

DEADLINE FOR SUBMITTAL MARCH 4, 1988	TOTAL EMISSIONS						
	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
A. FORM B-1, Fuels — General							
B. FORM B-2, Fuels — I.C. Engines							
C. FORM B-3, Organics							
D. FORM B-4, Process							
E. FORM B-5, Refinery							
F. FORM B-6, Power Plant							
G. Total Emissions lbs./yr. (Sum of lines A thru F)							
H. Total Emissions, tons/yr. (G ÷ 2000) (Round off to the nearest ton)							
I. Emissions exempted, tons*	10*		10*	10*	10*	100*	10*
J. Emissions subject to fee, tons (H-I) (Enter Zero if negative, but enter TOTAL of line H if it exceeds values of line I.							
K. Fee Rate, \$/ton	241.00	0	43.00	139.00	167.00	2.10	184.00
L. Fee for each pollutant, \$ (JxK)							
M. TOTAL EMISSIONS FEE, Sum of Line, \$							

PLEASE SEND FEE PAYMENT AND ONE COPY OF COMPLETED FORMS B-1, B-2, ETC., AND FORM C TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621. TO AVOID LATE PAYMENT PENALTIES, MAKE CHECKS TO S.C.A.Q.M.D., AND MAIL TO BE POSTMARKED NOT LATER THAN MARCH 4, 1988.

THE ABOVE EMISSIONS ARE BASED ON OUR ORGANIZATION OPERATING ON THE FOLLOWING AVERAGE SCHEDULE \_\_\_\_\_  
 \_\_\_\_\_ HOURS/DAY \_\_\_\_\_; DAYS/WEEK AND \_\_\_\_\_ WEEKS/YEAR.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1987.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME \_\_\_\_\_

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

\*APPLICABLE ONLY FOR QUANTITIES OF 10 TONS OR LESS (100 TONS OR LESS FOR CARBON MONOXIDE).

# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FORM C

## SUMMARY OF EMISSIONS AND DETERMINATION OF FEES FOR PLANT PREMISES FOR CALENDAR YEAR 1987

VALLEY RECLAMATION CO 7245 LAUREL CANYON BLVD NORTH HOLLYWOOD ID NUMBER: 13831-RP	<b>FOR SCAQMD USE ONLY</b> <hr/> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: 1px solid black; padding: 2px;">REVIEWED BY:</td> <td style="width: 50%; border: 1px solid black; padding: 2px;">ENTERED:</td> </tr> </table>	REVIEWED BY:	ENTERED:
REVIEWED BY:	ENTERED:		

**INSTRUCTION: TO COMPLETE THIS FORM, REFER TO THE INSTRUCTIONS PROVIDED ON "GENERAL INSTRUCTION" SHEET.**

DEADLINE FOR SUBMITTAL MARCH 4, 1988	TOTAL EMISSIONS						
	ORGANIC GASES	METHANE	SPECIFIC ORGANICS	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PARTICULATE MATTER
A. FORM B-1, Fuels — General							
B. FORM B-2, Fuels — I.C. Engines							
C. FORM B-3, Organics							
D. FORM B-4, Process							
E. FORM B-5, Refinery							
F. FORM B-6, Power Plant							
G. Total Emissions lbs./yr. (Sum of lines A thru F)							
Total Emissions, tons/yr. H. (G ÷ 2000) (Round off to the nearest ton)							
I. Emissions exempted, tons*	10*		10*	10*	10*	100*	10*
J. Emissions subject to fee, tons (H-I) (Enter Zero if negative, but enter TOTAL of line H if it exceeds values of line I.							
K. Fee Rate, \$/ton	241.00	0	43.00	139.00	167.00	2.10	184.00
L. Fee for each pollutant, \$ (JxK)							
M. TOTAL EMISSIONS FEE, Sum of Line, \$							

**PLEASE SEND FEE PAYMENT AND ONE COPY OF COMPLETED FORMS B-1, B-2, ETC., AND FORM C TO THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, FILE NO. 21621, LOS ANGELES, CA 90074-1621. TO AVOID LATE PAYMENT PENALTIES, MAKE CHECKS TO S.C.A.Q.M.D., AND MAIL TO BE POSTMARKED NOT LATER THAN MARCH 4, 1988.**

THE ABOVE EMISSIONS ARE BASED ON OUR ORGANIZATION OPERATING ON THE FOLLOWING AVERAGE SCHEDULE \_\_\_\_\_  
 \_\_\_\_\_ HOURS/DAY \_\_\_\_\_; DAYS/WEEK AND \_\_\_\_\_ WEEKS/YEAR.

I SWEAR UNDER PENALTY OF PERJURY THAT THE DATA SUBMITTED ARE A TRUE RECORD OF THROUGHPUT, EMISSIONS, AND/OR CONSUMPTION FOR CALENDAR YEAR 1987.

NAME \_\_\_\_\_ Signature \_\_\_\_\_  
TYPE OR PRINT

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

PREPARER, IF OTHER THAN ABOVE:

NAME \_\_\_\_\_

TITLE \_\_\_\_\_ Date \_\_\_\_\_ Phone No. ( \_\_\_\_\_ ) \_\_\_\_\_

\*APPLICABLE ONLY FOR QUANTITIES OF 10 TONS OR LESS (100 TONS OR LESS FOR CARBON MONOXIDE).

EXAMPLE: Basic Foundry and Chemical Company melts 30 tons of aluminum per year in a crucible furnace, which has an emission factor of 2 lbs of particulate matter per ton of aluminum produced. The permit number of the furnace is A-12345. The company also has a sand handling system which moves 1,000 tons of sand per year. This system has an emission factor of 0.1 lb particulate matter per ton of sand handled. They also produce 3,000 tons/year of phthalic anhydride in a plant that operates 8,000 hrs/year. This process has an emission factor of 32 lbs organic gases/ton of production.

In addition, they burn 50 tons of waste material in an incinerator, which has emission factors of 8 lbs of particulates and 3 lbs of NO<sub>x</sub> per ton of waste burned. The permit number of the incinerator is P-3642.

Emission calculations for equipment:

Aluminum Furnace - Particulate Matter = 2 lbs/ton x 30 tons/yr = 60 lbs/yr

Sand System - Particulate Matter = 0.1 lbs/ton x 1000 tons/yr = 100 lbs/yr

Phthalic Anhydride - Organic Gases = 32 lbs/ton x 3000 tons/yr = 96,000 lbs/yr

Incinerator - Particulate Matter = 8 lbs/ton x 50 tons/yr = 400 lbs/yr

- Nitrogen Oxides = 3 lbs/ton x 50 tons/yr = 150 lbs/yr

PERMIT NO. OR PROCESS DESCRIPTION	ANNUAL PRODUCTION* OR THROUGHPUT*	OPERATING TIME HRS/YR	EMISSIONS - LBS/YR				
			ORGANIC GASES	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
A-12345	30		*	*	*	*	2.0*
							60
Sand Handling System	1000		*	*	*	*	0.1*
							100
Phthalic Anhydride System	3000	8000	32*	*	*	*	*
			96,000				
P-3642	50		*	3.0*	*	*	8.0*
				150			400
			*	*	*	*	*
			*	*	*	*	*
TOTAL EMISSIONS, LBS/YR			96,000	150			560

\* Enter in tons per year.

\* Enter in thousands of gallons per year.

\* Emission Factor in pounds per ton of production.

FOR CALENDAR YEAR 1987  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**FORM B-4: EMISSIONS FROM PROCESS (MECHANICAL, METALLURGICAL,  
CHEMICAL, ETC.)**

COMPANY NAME: \_\_\_\_\_ I.D. No. \_\_\_\_\_  
(Copy the Company Name and I.D. No. as it appears on Form C)

INSTRUCTIONS: Please complete the table below according to the following steps:

1. Enter permit number or process description.
2. Enter annual production in tons per year of product during calendar year \_\_\_\_\_ for manufacturing facilities. Enter throughput in thousands of gallons per year during calendar year \_\_\_\_\_ for storage tanks.
3. Enter total operating time of the process in hours for the calendar year. (hrs/day x days/week x weeks/yr)
4. Enter the appropriate emission factors.
5. Calculate emissions for each pollutant by multiplying the annual production by the emission factors.
6. Sum up total emission of each pollutant and transfer the amount to Form C, Line D. If more than one sheet is required, add the "Total Emissions" from each sheet and enter the grand total for each pollutant on Form C, Line D.

(An example of completing this form for a typical company is illustrated on the back of this form.)

PERMIT NO. OR PROCESS DESCRIPTION	ANNUAL PRODUCTION <sup>+</sup> OR THROUGHPUT <sup>+</sup>	OPERATING TIME HRS/YR	EMISSIONS - LBS/YR				
			ORGANIC GASES	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
			*	*	*	*	*
			*	*	*	*	*
			*	*	*	*	*
			*	*	*	*	*
			*	*	*	*	*
			*	*	*	*	*
TOTAL EMISSIONS, LBS/YR							

\* Enter in tons per year.

\* Enter in thousands of gallons per year.

\* Emission Factor in pounds per ton of production.

Example is shown for calendar year 1980

EXAMPLE: Industrial Dry Cleaners had the following solvent usage in 1980:

Solvent Usage for Year 1980

Perchloroethylene\*

- A. On Hand Jan. 1, 1980 1,100 gals.
- B. Purchased in 1980 3,250 gals.
- C. On Hand Dec. 31, 1980 1,600 gals.

Solvent usage: Lines(A + B - C)  
 $1,100 + 3,250 - 1,600 = 2,750$  gals.

\* Note: Do not deduct any solvent recovered by carbon adsorber or sniffer.

Petroleum Solvent

- A. On Hand Jan. 1, 1980 5,250 gals.
- B. Purchased in 1980 11,350 gals.
- C. Waste Solvent Returned  
(0.50 Solvent Credit) 1,050 gals.
- D. On Hand Dec. 31, 1980 3,575 gals.

Solvent usage: Lines(A + B - 0.50 C - D)  
 $5,250 + 11,350 - 0.50 \times 1,050 - 3,575 =$   
 $5,250 + 11,350 - 525 - 3,575 = 12,500$  gals.

TYPE OF ORGANIC	ANNUAL USAGE FOR YEAR 1980	EMISSION FACTOR	EMISSIONS OF ORGANIC GASES LBS/YR
Perchloroethylene	2,750 gals.	13.5	37,125
Petroleum Solvent	12,500 gals.	6.5	81,250
TOTAL EMISSIONS, LBS/YR -----			118,375

## EXAMPLE

XYZ company manufactures toys using enamel and lacquer coatings. This example demonstrates the emission computations for their enamel and lacquer lines.

### ENAMEL LINE

2,500 gals/year	enamel
500 gals/year	thinner
150 gals/year	cleanup solvent

The enamel is applied in a spray booth, allowed to dry further on a conveyor before entering the oven. The oven vents to an afterburner with a control efficiency overall of 90%. Emissions to atmosphere are approximately 76% from spray booth and conveyor, with the remainder (from the oven) venting to the afterburner. The emissions for the example are calculated below.

A) Total weight of organics in enamel spraying = enamel + thinner.

Enamel: 2,500 gals/yr x 4.5 lbs/gal = 11,250 lbs/yr

Thinner: 500 gals/yr x 7 lbs/gal = 3,500 lbs/yr

Total sprayed = 14,750 lbs/yr

B) Estimate 76% of total sprayed lost to atmosphere from spray booth and conveyor.

$0.76 (14,750 \text{ lbs.}) = 11,210 \text{ lbs. lost to atmosphere.}$

C) Estimate 10% of remaining organics lost to atmosphere from oven and afterburner:

$(14,750 - 11,210) \times .10 = 354 \text{ lbs.}$

D) Total lost to atmosphere from enamel line:

1. Spraying and conveying	11,210 lbs.
---------------------------	-------------

2. Oven/afterburner	<u>354 lbs.</u>
---------------------	-----------------

Total	11,564 lbs.
-------	-------------

②

NOTE: If xyz company has no afterburner, losses would be 100% of organics, e.g. 14,750 lbs./yr.

FORM B-3: EMISSIONS FROM THE USE OF ORGANICS

**INSTRUCTIONS:** Please complete the table below according to the following steps:

- (Examples of completing this form for typical companies are illustrated on the attached sheets.)

### EMISSION FACTOR TABLE FOR COMMON ORGANICS

(\*) Specific organics (marked with \*) are totaled separately  
- see other side -

2011/87

FOR CALENDAR YEAR 1987  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

FORM B-3: EMISSIONS FROM THE USE OF ORGANICS

COMPANY NAME: \_\_\_\_\_ I.D. No. \_\_\_\_\_

(Copy the company and I.D. No. as it appears on Form C)

INSTRUCTIONS: Please complete the table below according to the following steps:

1. List all organics used in your business in calendar year. All types used must be listed (use photocopies of this sheet if necessary).
2. Enter the annual usage for calendar year of each organic in gallons per year except for fibreglass products. For fibreglass products, enter pounds per year.
3. Fill in the appropriate emission factor from the emission factor table below or from the table on the back of this form. If your organic material is not listed, provide your own emission factor. Submit data to substantiate your emission factor.
4. Calculate emissions for each organic by multiplying the annual usage by the emission factor.
5. Sum up total organic emissions and transfer the amount to Form C, Line C. If more than one sheet is required, add the "Total Emissions" from each sheet and enter the grand total on Form C, Line C.

(Examples of completing this form for typical companies are illustrated on the attached sheets.)

TYPE OF ORGANIC	USAGE FOR YEAR	EMISSION FACTOR	SPECIFIC ORGANICS LBS/YEAR (*)	EMISSIONS OF ORGANIC GASES LBS/YEAR
TOTAL	(gallons)			

### EMISSION FACTOR TABLE FOR COMMON ORGANICS

<u>Coatings</u>	<u>Lbs. of Orgs./Gal.</u>	<u>Printing Industry</u>	<u>Lbs. of Orgs./Gal.</u>
Adhesives	5.5	Litho Inks & Ltr Press Inks	3.0
Enamel	4.5	Flexo Inks	5.5
Lacquer	5.5	Water Soluble Inks	0.0
Primers	5.0	Gravure Inks	5.5
Sealer	5.7		
Solvents	7.0	<u>Degreasers and Dry Cleaners</u>	
Stains (spirit 6.0) opaque	4.8	* 111 Trichloroethane	11.1
Stains (semitransparent)	6.7	Perchloroethylene	13.5
Varnish	4.5	* Methylene Chloride	11.2
Water Based	3.0	Petroleum (Stoddard, 140°F)	6.5

(\*) Specific organics (marked with \*) are totaled separately  
- see other side -

FOR CALENDAR YEAR 1987  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**FORM B-3: EMISSIONS FROM THE USE OF ORGANICS**

COMPANY NAME: \_\_\_\_\_ I.D. No. \_\_\_\_\_  
(Copy the company and I.D. No. as it appears on Form C)

INSTRUCTIONS: Please complete the table below according to the following steps:

1. List all organics used in your business in calendar year. All types used must be listed (use photocopies of this sheet if necessary).
2. Enter the annual usage for calendar year of each organic in gallons per year except for fibreglass products. For fibreglass products, enter pounds per year.
3. Fill in the appropriate emission factor from the emission factor table below or from the table on the back of this form. If your organic material is not listed, provide your own emission factor. Submit data to substantiate your emission factor.
4. Calculate emissions for each organic by multiplying the annual usage by the emission factor.
5. Sum up total organic emissions and transfer the amount to Form C, Line C. If more than one sheet is required, add the "Total Emissions" from each sheet and enter the grand total on Form C, Line C.

(Examples of completing this form for typical companies are illustrated on the attached sheets.)

TYPE OF ORGANIC	USAGE FOR YEAR	EMISSION FACTOR	SPECIFIC ORGANICS LBS/YEAR (*)	EMISSIONS OF ORGANIC GASES LBS/YEAR
TOTAL	(gallons)			

EMISSION FACTOR TABLE FOR COMMON ORGANICS

<u>Coatings</u>	<u>Lbs. of Orgs/Gal.</u>	<u>Printing Industry</u>	<u>Lbs. of Orgs/Gal.</u>
Adhesives	5.5	Litho Inks & Ltr Press Inks	3.0
Enamel	4.5	Flexo Inks	5.5
Lacquer	5.5	Water Soluble Inks	0.0
Primers	5.0	Gravure Inks	5.5
Sealer	5.7		
Solvents	7.0	<u>Degreasers and Dry Cleaners</u>	
Stains (spirit 6.0) opaque	4.8	* 111 Trichloroethane	11.1
Stains (semitransparent)	6.7	Perchloroethylene	13.5
Varnish	4.5	* Methylene Chloride	11.2
Water Based	3.0	Petroleum (Stoddard, 140°F)	6.5

(\*) Specific organics (marked with \*) are totaled separately  
- see other side -

**TABLE OF EMISSION FACTORS FOR I.C. ENGINES  
AND TURBINES FROM EPA PUBLICATION AP 42**

TYPE OF ENGINE	TYPE OF FUEL	EMISSION FACTOR					
		ORGANIC GASES (1)	METHANE (1)	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Internal Combustion Propane = C <sub>3</sub> H <sub>8</sub> Butane = C <sub>4</sub> H <sub>10</sub>	Natural Gas	280*	1120*	3400*	0.6*	430*	0
	LPG (C <sub>3</sub> or C <sub>4</sub> )	83†	-	139†	0.35†	129†	5†
	Gasoline	206†	-	102*	5.3*	3910*	6.5*
	Distillate Oil or Diesel Oil	37.5*	-	469*	31.2*	102*	33.5*
Turbine	Natural Gas	42 *	-	413*	0.6*	115*	14*
	Distillate Oil or Diesel Oil	5.57*	-	67.8*	31.2*	15.4*	5*

\* Emission Factors in lbs per million cu. ft.

† Emission Factors in lbs per thousand gallons.

**EXAMPLE:** ABC Oil Company operates two field compressors each driven by a diesel engine using distillate oil and a standby electrical generator driven by a natural gas-fired turbine. Each diesel engine used 129,000 gallons and the turbine burned 70,000,000 cu. ft. of gas in calendar year. 30,000 gallons propane used by forklifts.

Emission calculations for diesel engines:

Organic Gases	258 thous. gals/yr x 37.5 lbs/thous. gal. =	9,675 lbs.
Nitrogen Oxides	258 thous. gals/yr x 469 lbs/thous. gal. =	121,002 lbs.
Sulfur Oxides	258 thous. gals/yr x 31.2 lbs/thous. gal. =	8,500 lbs.
Carbon Monoxide	258 thous. gals/yr x 102 lbs/thous. gal. =	26,316 lbs.
Part. Matter	258 thous. gals/yr x 33.5 lbs/thous. gal. =	8,643 lbs.

Similar calculations performed for the natural gas-fired turbine will yield the values tabulated in the following form:

TYPE OF ENGINE	TYPE FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
			ORGANIC GASES	METHANE	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Internal Combustion	Diesel	258	37.5		469	31.2	102	33.5
			9675		121,002	8,050	26,316	8,643
Turbine	Natural Gas	70	42		413	.6	115	14
			2940		28,910	42	8,050	980
Forklifts	Propane	30	83		139	.35	129	5
			2490		4170	10.5	3870	150
TOTAL EMISSIONS, LBS/YR			15105		154082	8102.5	38236	9773

\* Enter millions of cubic feet or thousands of gallons.

† Enter appropriate emission factor.

... Applicant may use other emission factors providing that he establishes these values by documented and certified monthly source tests and uses an analytical procedure approved by the SCAQM

**TABLE OF EMISSION FACTORS FOR I.C. ENGINES  
AND TURBINES FROM EPA PUBLICATION AP 42**

TYPE OF ENGINE	TYPE OF FUEL	EMISSION FACTOR					
		ORGANIC GASES (1)	METHANE (1)	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Internal Combustion Propane = C <sub>3</sub> H <sub>8</sub> Butane = C <sub>4</sub> H <sub>10</sub>	Natural Gas	280*	1120*	3400*	0.6*	430*	0
	LPG (C <sub>3</sub> or C <sub>4</sub> )	83†	-	139†	0.35†	129†	5†
	Gasoline	206†	-	102*	5.3*	3910*	6.5*
	Distillate Oil or Diesel Oil	37.5*	-	469*	31.2*	102*	33.5*
Turbine	Natural Gas	42 *	-	413*	0.6*	115*	14*
	Distillate Oil or Diesel Oil	5.57*	-	67.8*	31.2*	15.4*	5*

- \* Emission Factors in lbs per million cu. ft.  
† Emission Factors in lbs per thousand gallons.

**EXAMPLE:** ABC Oil Company operates two field compressors each driven by a diesel engine using distillate oil and a standby electrical generator driven by a natural gas-fired turbine. Each diesel engine used 129,000 gallons and the turbine burned 70,000,000 cu. ft. of gas in calendar year. 30,000 gallons propane used by forklifts.

Emission calculations for diesel engines:

Organic Gases 258 thous. gals/yr x 37.5 lbs/thous. gal. = 9,675 lbs.  
Nitrogen Oxides 258 thous. gals/yr x 469 lbs/thous. gal. = 121,002 lbs.  
Sulfur Oxides 258 thous. gals/yr x 31.2 lbs/thous. gal. = 8,050 lbs.  
Carbon Monoxide 258 thous. gals/yr x 102 lbs/thous. gal. = 26,316 lbs.  
Part. Matter 258 thous. gals/yr x 33.5 lbs/thous. gal. = 8,643 lbs.

Similar calculations performed for the natural gas-fired turbine will yield the values tabulated in the following form:

TYPE OF ENGINE	TYPE FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
			ORGANIC GASES	METHANE	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Internal Combustion	Diesel	258	37.5		469	31.2	102	33.5
			9675		121,002	8,050	26,316	8,643
Turbine	Natural Gas	70	42		413	.6	115	14
			2940		28,910	42	8,050	980
Forklifts	Propane	30	83		139	.35	129	5
			2490		4170	10.5	3870	150
TOTAL EMISSIONS, LBS/YR			15105		154082	8102.5	38236	9773

- \* Enter millions of cubic feet or thousands of gallons.  
† Enter appropriate emission factor.

(1) Applicant may use other emission factors providing that he establishes these values by documented and certified monthly source tests and uses an analytical procedure approved by the SCAQM

FOR CALENDAR YEAR 1987  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**FORM B-1: EMISSIONS FROM BURNING OF FUELS--GENERAL**  
DO NOT USE FOR I.C. ENGINES OR TURBINES

COMPANY NAME: \_\_\_\_\_ I.D. No. \_\_\_\_\_  
(Copy the Company Name and I.D. No. as it appears on Form C)

INSTRUCTIONS: Please complete the table below according to the following steps:

1. Enter the annual usage for each type of fuel used in calendar year in millions of cubic feet or thousands of gallons.
2. Calculate emissions for each pollutant by multiplying the annual usage by the emission factors provided.

If you use an alternate emission factor, cross out the emission factor provided and enter the alternate one in the space to the right. A copy of the data which substantiates the numerical value of the alternate emission factor must be provided when you submit this form.

3. Sum up total emissions for each pollutant and transfer the amount to Form C, Line A.

(An example of completing this form for a typical company is illustrated on the back of this form.)

FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
		ORGANIC GASES (1)	METHANE (1)	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Natural Gas	Million cu. ft)	7.0*		213*	0.83*	4.1*	17.5*
LPG Propane Butane	(1000 Gals)	0.26*	0.28*	12.8*	4.6*	3.2*	.28*
Diesel Oil Light Dist. (0.15 S)	(1000 Gals)	2.7*		75*	14*	0.6*	3.6*
Fuel Oil (0.25% S)	(1000 Gals)	2.7*		75*	32.3*	0.6*	4.9*
Fuel Oil (0.50% S)	(1000 Gals)	2.7*		75*	77.6*	0.6*	7.1*
TOTAL EMISSIONS, LBS/YR							

\* Emission Factors in lbs per million cu. ft.

\* Emission Factors in lbs per thousand gallons.

(1) See note at top of reverse side.

- (1) Applicant may use other emission factors providing that he establishes these values by documented and certified current source tests and uses an analytical procedure approved by the SCAQMD.

EXAMPLE: Company "A" burned 160 million cubic feet of natural gas, 200 thousand gallons of butane, and 680 thousand gallons of 0.5% sulfur fuel oil in calendar year.

Emission calculations for natural gas:

Organic Gases = 160 million cu. ft./yr x 7.0 lbs/million cu.ft. = 1,120 lbs/yr

Nitrogen Oxide = 160 million cu. ft./yr x 213 lbs/million cu.ft. = 34,080 lbs/yr

Sulfur Oxide = 160 million cu. ft./yr x 0.83 lbs/million cu.ft. = 133 lbs/yr

Carbon Monoxide = 160 million cu. ft./yr x 4.1 lbs/million cu.ft. = 656 lbs/yr

Part. Matter = 160 million cu. ft./yr x 17.5 lbs/million cu.ft. = 2,800 lbs/yr

Similar calculations performed for butane and fuel oil will yield the values tabulated in the following form:

FUEL	ANNUAL USAGE	EMISSIONS - LBS/YR					
		ORGANIC GASES	METHANE	NITROGEN OXIDES	SULFUR OXIDES	CARBON MONOXIDE	PART. MATTER
Natural Gas	160	7.0*		213*	0.83*	4.1*	17.5*
	Million cu. ft.	1120		34,080.	133	656.	2,800
LPG Propane Butane	200	0.26*	0.28*	12.8*	4.6*	3.2*	.28*
	(1000 Gals)	52	56	2560	920	640	56
Diesel Oil Light Dist. (0.1% S)	(1000 Gals)	2.7*		75*	14*	0.6*	3.6*
Fuel Oil (0.25% S)	(1000 Gals)	2.7*		75*	32.3*	0.6*	4.9*
Fuel Oil (0.50% S)	680	2.7*		75*	77.6*	0.6*	7.1*
	(1000 Gals)	1836		51,000	52,768	408	4,828
TOTAL EMISSIONS, LBS/YR		3008	56	87,640	53,821	1,704	7,684

\* Emission Factor in lbs per million cu. ft.

\* Emission Factor in lbs per thousand gallons.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

General Instructions

The format and forms used to report emissions and calculate the emission fees may have been changed from last year.

Forms B-1 through B-6 were developed for calculating emissions from specific sources. Some of these forms have not been sent to you since they are not applicable to your company. In addition, some of the forms you have received may not be relevant to your company. Please complete the forms which are applicable. If you have any questions, please contact the person listed for your company in the cover letter.

Instructions For Completing Form C

1. Transfer the total emissions from each Form B-1 through B-6 to the appropriate line on Form C (Lines A-F).
2. Add the numbers in each of the columns headed: Organic Gases, Methane, Specific Organics, Nitrogen Oxides, Sulfur Oxides, Carbon Monoxides and Particulate Matters. Enter the sum of each column on Line 6. Please note: it is no longer necessary to pay for emissions from equipment not requiring a Permit to Operate. If possible, we would like to know the amount of these emissions in tons per year.
3. Divide the numbers on Line G by 2,000 and enter the result (quotient) on Line H (round off to nearest ton).
4. Subtract the number printed on Line I from the number on Line H. If the result is zero or negative, enter zero on Line J. If the result is greater than zero, enter number of Line H on Line J. Do not make entries for methane on Line J.
5. Multiply the number on Line J by the number printed on Line K and enter the product on Line L (except Methane).
6. Add the numbers on Line L and enter the sum on Line M.

The number(s) entered on Line M is the amount which must be submitted to the SCAQMD by the date specified on the cover letter to avoid penalty payment.

7. Fill out the average operating schedule for your organization.

## ATTENTION

ON DECEMBER 6, 1985, THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT BOARD OF DIRECTORS ADOPTED A CHANGE TO RULE 301 CONCERNING ANNUAL PERMIT FEES BASED ON EMISSIONS. THE MODIFIED RULE DOES NOT REQUIRE EMISSION FEES TO BE PAID FOR AIR CONTAMINANTS RELEASED FROM EQUIPMENT NOT REQUIRING A WRITTEN PERMIT PURSUANT TO REGULATION II, PROVIDED THE OWNER/OPERATOR KEEPS SEPARATE RECORDS WHICH ALLOW THE DETERMINATION OF EMISSIONS FROM SUBJECT EQUIPMENT.

TO QUALIFY FOR THIS EXCEPTION A COMPANY MUST BE ABLE TO IDENTIFY THE EXACT EMISSIONS FROM A PIECE OF EQUIPMENT BY SOME DEFINITIVE METHOD, SUCH AS MEASUREMENT OF PROCESS MATERIALS OR STACK EMISSIONS USING FLOW METERS, MONITORS, RECORD OF OPERATION, ETC. ESTIMATES OF EMISSIONS BASED ON RATING OR GENERAL USAGE WILL NOT BE ACCEPTED.

IN FILLING OUT THE FORMS, PLEASE COMPLETE THE DATA FOR PERMITTED EQUIPMENT. ON A VOLUNTARY BASIS, WE WOULD APPRECIATE INFORMATION ON YOUR NON-PERMITTED EQUIPMENT. THE INFORMATION WILL BE USED FOR EMISSION INVENTORY PURPOSES WHICH FORM THE BASIS FOR AIR POLLUTION CONTROL STRATEGIES AND TACTICS.      THANK YOU.

- (C) If one hundred twenty (120) days have elapsed since the notice to pay fee was sent and all emission fees have not been received, the Executive Officer may take action to revoke all Permits to Operate for equipment on the premises as authorized in Health and Safety Code, Section 42307.

#### Rule 301.1 Permit Fee Rates

(d) Annual Permit Fee Based on Emissions

Each source emitting in excess of 10 tons per year (rounded to the nearest ton) of any one of the following air contaminants: gaseous sulfur compounds (expressed as sulfur dioxide), total organic gases (other than those specified), specified organic gases (listed in paragraph (b) of Rule 301.2), oxides of nitrogen (expressed as nitrogen dioxide), or particulate matter, and in excess of 100 tons per year (rounded to the nearest ton) for carbon monoxide, shall be assessed a fee for every ton of that contaminant as prescribed in paragraph (b) of Rule 301.2.

#### Rule 301.2 Fee Schedules

(b) Air Contaminant

Dollars Per Ton

Organic gases, other than those specified below	241.00
Methylene Chloride, 1,1,1-trichloroethane, trifluoromethane, and chlorinated-fluorinated hydrocarbons	43.00
Carbon Monoxide	2.10
Oxides of Nitrogen (expressed as nitrogen dioxide)	139.00
Gaseous Sulfur Compounds (expressed as sulfur dioxide)	167.00
Particulate Matter	184.00

## NOTICE

THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
WILL AUDIT THE EMISSIONS OF SOME OF THE COMPANIES  
INVOLVED WITH THE 1988 EMISSION PERMIT FEE PROGRAM.  
PLEASE RETAIN ALL RECORDS AND CALCULATIONS USED  
IN PREPARING THESE FORMS FOR AT LEAST 24 MONTHS.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
ANNUAL AIR POLLUTION EMISSIONS PERMIT FEE

INTRODUCTION

The Lewis Air Quality Management Act of 1976 made provision for annual permit fees based on emissions. The Board of the South Coast Air Quality Management District activated this provision of State Law in June, 1977, and amended it on June 16, 1978, September 5, 1980, June 5, 1981, July 9, 1982, June 3, 1983, July 6, 1984, May 17, 1985, December 6, 1985, June 6, 1986 and May 1, 1987. Part (f) of Rule 301 reads as follows:

(f) Annual Permit Fee Based on Emissions

- (1) In addition to the annual operating permit fee the owner/operator of all equipment operating under permit shall pay an annual permit fee based on the total weight of emissions of each of the contaminants specified in paragraph (d) of Rule 301.1 from all equipment on the premises, including equipment not requiring a written permit pursuant to Regulation II (see Rule 219), except that a fee need not be paid for emissions from equipment not requiring a written permit pursuant to Regulation II if the owner/operator keeps separate records which allow the determination of emissions from such equipment.
- (2) Declaration of Total Emissions from Preceding Calendar Year

The owner/operator of equipment subject to subparagraph (f)(1) shall declare to the Executive Officer the total emissions for the preceding calendar year of each of the air contaminants concerned from all equipment on the premises regardless of quantities emitted. The declaration shall be made at the time and in the manner prescribed on forms provided by the Executive Officer. The Executive Officer will determine the emission factors

**PLEASE  
RETURN EMISSION FEE  
FORMS AND CHECK  
TO THE NEW  
ADDRESS BELOW**

**SCAQMD**

**FILE NO. 21621**

**LOS ANGELES, CA 90074-1621**



**South Coast  
AIR QUALITY MANAGEMENT DISTRICT**  
9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731 •

**RECEIVED**  
DEC 29 1987  
Regulatory Matters Dept.

VALLEY REGISTRATION OF  
3014 CANFIELD ROAD  
LOS ANGELES, CALIF. 90008

January 4, 1988

Equipment Location:

7240 LAUREL CANYON BLVD  
NORTH HOLLYWOOD

Gentlemen:

**INFORMATION ON REPORTING OF ANNUAL AIR  
POLLUTION EMISSIONS FOR THE CALENDAR YEAR 1987**

The South Coast Air Quality Management District requires companies to pay an annual permit fee based on the emissions of air contaminants, as stated in Rule 301(f). The emission fee is authorized by the Lewis Air Quality Management Act of 1976.

The enclosed forms should be used for calculating and reporting your air pollution emissions. Two copies of each form are supplied, one for your records and one to return to the District. Even if you report no fee due, you must complete and return the applicable forms to the District, as we use this data to update our emission inventory. If an emission fee is due, include your payment (make check payable to S.C.A.Q.M.D.) with your forms. If you need any assistance, please telephone the following: if your company name begins with the letters A-E inclusive — Mr. Ted Polychronis - (818) 572-6237; company names beginning with the letters F-O — Mr. Carl Anderson - (818) 572-6490; company names beginning with the letters P-Z — Mr. Amir Dejbakhsh - (818) 572-6252.

Please note that the fee exemption of the initial 10 tons (100 tons of carbon monoxide) of emissions has been eliminated when the emissions exceed 10 tons (or 100 tons of carbon monoxide). Thus, 10 tons or less of emissions are still subject to no fees, but 11 tons are subject to fees for 11 tons.

Rule 301 requires that your company's forms be in this office within 60 days. If your completed forms are not received by **March 4, 1988**, your permits will be suspended. Also, if your fees are not received by **March 4, 1988**, a penalty fee of 25 percent of the original fee will be imposed. If all permit fees are not received within 120 days from the day of this letter, your permits are subject to revocation.

Very truly yours,

William J. Dennison  
Director of Engineering

Enclosures  
Certified Mail  
Return Receipt Requested



**SCS FIELD SERVICES**

March 31, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of February 1 through 28, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas above the LEL was detected in any of the LFG migration control monitoring wells tested.
- Low concentrations of methane gas (up to 2.5 percent at Monitoring Well No. 42) were detected at several monitoring wells. By the end of the reporting period, all methane gas concentrations had decreased to none detected.
- Monitoring Well Nos. 37, 38, and 38B were observed to be damaged and in need of repair.
- Monitoring Well No. 39 was plugged during the majority of the reporting period.
- Monitoring Well Nos. 7, 7A, 9, and 43 could not be located during the entire or portions of the reporting period.
- Methane gas was detected beneath several self storage containers (up to 0.9 percent at Storage Container No. H-23). As of the date of this letter, low concentrations of methane gas continue to be detected beneath several containers.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.



Mr. George Cosby  
March 31, 1994  
Page Two

- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-16, W-20, W-21, W-23, W-24, W-25, W-27, W-28A, W-30, W-31, W-32, W-33, W-36, and W-38.
- Surface cracks were observed along the site perimeter (especially between MW-3B through MW-7, MW-1, and Perimeter Extraction Well Nos. P-5 through P-39).
- Surface cracks within the paved area of the site have been observed in the vicinity of Self Storage Container Nos. F12 through 15, F18 through 35, B-16, H1 through H5, and D46.
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The malfunctioning LFG condensate return pump flow totalizer has been repaired and reinstalled.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the dog leg area and in the vicinity of Monitoring Well Nos. 24, 24A, and Extraction Well No. W-16.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

March 31, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of February 1 through 28, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane



Mr. George Cosby  
March 31, 1994  
Page Two

gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.

#### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

#### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

#### Monitoring Well Testing

With the exception of Monitoring Well No. 4A, 5, 5A, 34, 41, and 42, all monitoring wells tested exhibited no methane gas detected throughout the reporting period. The levels of methane gas detected (up to 2.5 percent by volume and Monitoring Well No. 42) were below the LEL and are believed to be the result of unscheduled Blower/Flare Station shut-downs during the end of last reporting period. After system adjustments and continuous prolonged operation, methane gas concentrations decreased to none detected by the end of this reporting period.

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 37, 38, and 38B were observed to be damaged and in need of repair. In addition, Monitoring Well Nos. 7, 7A, 9, and 43 could not be located during the entire or portions of the reporting period due to being buried during on-site repair work performed by others. Finally, Monitoring Well No. 39 was observed to be plugged during the majority of the reporting period. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

#### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated methane gas concentrations (up to 0.9 percent by volume at Storage Container No. H-23) were detected beneath several self storage containers. In addition, methane gas concentrations were detected within cracks at surrounding asphalt areas. The two recently installed extraction wells in the vicinity of the self storage containers exhibiting the highest concentrations of methane gas appear to have been successful in reducing, although not eliminating, LFG emissions in this area. SCS-FS will continue to test this area to determine if these wells can consistently control the elevated LFG emissions previously observed.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 50 to 135 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

Mr. George Cosby  
March 31, 1994  
Page Four

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1574 degrees Fahrenheit. All other operating parameters remained within the prescribed limits. No unscheduled BFS shut-downs were reported during the reporting period.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

As previously reported, the condensate return pump flow totalizer (measured in gallons) appears to have malfunctioned. SCS-FS received and installed the repaired totalizer during the reporting period. Operation of this instrument has been erratic and the manufacturer is scheduled to make a troubleshooting site visit in March 1994. In addition, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-16, W-20, W-21, W-23, W-24, W-25, W-27, W-28A, W-30, W-31, W-32, W-33, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between MW-3B through MW-7, MW-1, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Finally, vegetation overgrowth has been observed in the dog leg area and in the vicinity of Monitoring Wells No. 24, 24A, and Extraction Well No. W-16. **SCS-FS recommends this vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in April 1994.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

Mr. George Cosby  
March 31, 1994  
Page Six

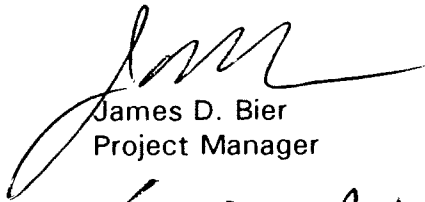
Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/01/94	P-1	ND	19.0	NO	-0.25	-0.29	59	4.0	ADJUSTED TO -0.15
02/01/94	P-2	NO	14.0	5.0	-0.25	0.02	59	1.6	
02/01/94	P-3	NO	20.0	NO	-0.25	-0.17	59	0.5	
02/01/94	P-4	NO	20.0	ND	-0.25	NO	58	0.8	
02/01/94	P-5	ND	20.0	NO	-0.25	0.04	62	1.0	
02/01/94	P-6	ND	18.0	1.0	-0.25	0.05	62	0.5	
02/01/94	P-7	ND	16.0	4.0	-0.25	0.07	63	0.5	
02/01/94	P-8	ND	19.0	1.0	-0.25	0.06	61	0.8	
02/01/94	P-9	ND	20.0	ND	-0.25	-0.04	62	1.0	
02/01/94	P-10	ND	19.0	ND	-0.25	0.02	59	1.6	
02/01/94	P-11	NO	14.0	5.0	-0.25	-0.06	61	2.4	
02/01/94	P-12	ND	20.0	NO	-0.25	-0.08	60	1.6	
02/01/94	P-13	ND	20.0	ND	-0.24	-0.14	63	1.6	
02/01/94	P-13A	ND	7.0	12.0	-0.25	-0.14	74	12.0	ADJUSTED TO -0.01
02/01/94	P-14	ND	20.0	NO	-0.25	-0.03	59	0.5	
02/01/94	P-15	ND	17.0	2.0	-0.25	-0.14	63	0.8	
02/01/94	P-16	ND	19.0	ND	-0.25	-0.01	58	0.8	
02/01/94	P-17	NO	17.0	3.0	-0.25	-0.29	63	0.5	
02/01/94	P-18	NO	16.0	3.0	-0.25	-0.01	59	2.4	
02/01/94	P-19	NO	14.0	6.0	-0.27	-0.25	65	3.2	ADJUSTED TO -0.14
02/01/94	P-20	ND	19.0	1.0	-0.27	0.01	56	0.8	
02/01/94	P-21	3.0	8.0	12.0	-0.27	-0.26	101	23.2	
02/01/94	P-22	NO	18.0	1.0	-0.29	NO	60	0.8	
02/01/94	P-23	NO	17.0	2.0	-0.29	NO	61	NO	
02/01/94	P-24	12.0	6.0	18.0	-0.32	-0.19	114	33.6	
02/01/94	P-25	6.0	11.0	12.0	-0.32	-0.29	119	41.6	
02/01/94	P-26	1.0	17.0	4.0	-0.34	-0.21	97	19.2	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/01/94	P-27	ND	20.0	ND	-0.36	-0.05	61	1.6	
02/01/94	P-28	6.0	5.0	17.0	-0.32	-0.18	135	38.4	
02/01/94	P-29	1.0	5.0	17.0	-0.30	-0.17	116	32.8	
02/01/94	P-30	5.0	9.0	12.0	-0.28	-0.17	122	44.0	
02/01/94	P-31	2.0	13.0	7.0	-0.28	-0.14	108	35.2	
02/01/94	P-32	1.0	16.0	3.0	-0.28	-0.08	93	29.6	
02/01/94	P-33	ND	16.0	4.0	-0.28	0.02	62	2.4	
02/01/94	P-34	ND	14.0	6.0	-0.28	0.04	59	1.6	
02/01/94	P-35	1.6	11.0	12.0	-0.28	-0.02	98	6.4	
02/01/94	P-36	3.0	9.0	18.0	-0.26	-0.09	111	28.8	
02/01/94	P-37	ND	20.0	ND	-0.26	-0.03	58	0.8	
02/01/94	P-38	ND	3.5	6.0	-0.26	0.03	66	1.6	
02/01/94	P-39	ND	20.0	2.0	-0.26	0.04	59	1.6	
02/01/94	W-1	17.0	0.3	25.0	-0.26	-0.24	67	55.1	
02/01/94	W-2	14.0	0.4	24.0	-0.24	-0.11	58	39.9	
02/01/94	W-3	43.0	2.1	27.0	-0.23	-0.20	61	6.4	
02/01/94	W-4	32.0	0.1	31.0	-0.23	-0.21	94	8.8	
02/01/94	W-5	34.0	3.6	32.0	-0.23	-0.04	58	4.8	
02/01/94	W-6	22.0	0.3	27.0	-0.23	-0.21	53	39.9	
02/01/94	W-7	56.0	0.2	36.0	-0.23	-0.22	61	15.2	
02/01/94	W-8	17.0	ND	27.0	-0.22	-0.14	89	12.8	
02/01/94	W-9	7.0	12.0	9.0	-0.25	-0.06	50	53.2	
02/01/94	W-10	18.0	0.1	26.0	-0.31	-0.10	52	57.0	
02/01/94	W-11	31.0	0.2	30.0	-0.36	-0.08	68	62.7	
02/01/94	W-12	ND	19.0	ND	-0.39	0.01	50	1.9	
02/01/94	W-13	26.0	0.4	28.0	-0.42	-0.08	51	39.9	
02/01/94	W-14	14.0	1.1	24.0	-0.48	-0.09	108	32.3	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/01/94	W-15	0.3	19.0	0.6	-0.50	-0.21	52	172.9	
02/01/94	W-16	33.0	ND	31.0	-1.20	-0.42	89	79.8	
02/01/94	W-17	22.0	1.8	26.0	-1.20	-0.34	56	64.6	
02/01/94	W-18	22.0	ND	27.0	-1.20	-0.34	61	72.2	
02/01/94	W-20	28.0	0.7	29.0	-0.82	-0.74	69	58.9	
02/01/94	W-21	41.0	0.1	33.0	-0.82	-0.78	102	70.4	
02/01/94	W-23	44.0	0.1	36.0	-36.0	-1.20	68	129.2	ADJUSTED TO -1.80
02/01/94	W-24	22.0	3.6	28.0	-34.0	-1.25	64	83.6	ADJUSTED TO -0.58
02/01/94	W-25	53.0	1.0	32.0	-34.0	-27.5	94	63.2	HEAVY SURGING
02/01/94	W-26	12.0	2.1	21.0	-34.0	-1.40	78	79.8	ADJUSTED TO -0.34
02/01/94	W-27	53.0	ND	38.0	-36.0	-11.5	87	340.1	ADJUSTED TO -12.3
02/01/94	W-28	24.0	0.4	29.0	-36.0	-0.68	94	79.8	
02/01/94	W-28A	36.0	0.9	31.0	-34.5	-2.20	131	65.6	
02/01/94	W-28B	32.0	0.9	30.0	-34.5	-0.50	111	81.7	
02/01/94	W-29	38.0	0.4	32.0	-35.0	-1.90	119	376.2	ADJUSTED TO -2.60
02/01/94	W-29A	0.4	1.4	15.0	-34.0	-0.21	52	7.6	
02/01/94	W-30	32.0	0.2	34.0	-34.0	-19.5	64	25.6	HEAVY SURGING
02/01/94	W-31	56.0	0.1	38.0	-34.0	-28.5	108	56.8	
02/01/94	W-32	31.0	0.1	30.0	-34.0	-0.44	62	28.0	
02/01/94	W-33	22.0	3.6	28.0	-34.5	-17.0	108	233.7	ADJUSTED TO -9 TO -18
02/01/94	W-36	42.0	1.3	31.0	-34.0	-14.5	118	305.9	ADJUSTED TO -16 TO -17
02/01/94	W-37	364.0	0.8	32.0	-34.0	-15.5	93	184.3	
02/01/94	W-37A	13.0	1.5	21.0	-16.0	-0.09	97	15.2	
02/01/94	W-37B	19.0	0.3	28.0	-13.5	-0.12	109	17.6	
02/01/94	W-38	0.3	19.0	0.3	-34.0	-32.0	72	36.1	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1



**SCS FIELD SERVICES**

April 27, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of March 1 through 31, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- With the exception of Monitoring Well No. 5A (up to 0.2 percent on March 1, 1994), no methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair.
- Monitoring Well No. 39 was plugged during the majority of the reporting period.
- Monitoring Well Nos. 9 and 43 could not be located during the entire or portions of the reporting period.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-30, W-31, W-32, W-36, and W-38.
- Surface cracks were observed along the site perimeter (especially between MW-3B through MW-7, MW-1, and Perimeter Extraction Well Nos. P-5 through P-39).

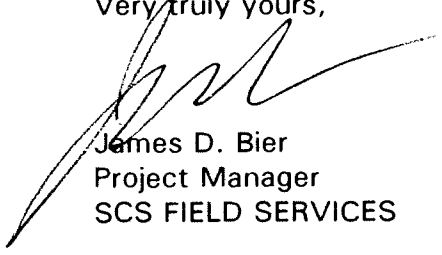


Mr. George Cosby  
April 27, 1994  
Page Two

- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of Extraction Well No. W-18, W-20, W-21, W-28, W-28A, W-28B, and W-31 through W-33.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

April 27, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of March 1 through 31, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.



Mr. George Cosby  
April 27, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well No. 5A (0.2 percent by volume on March 1, 1994), all monitoring wells tested exhibited no methane gas detected throughout the reporting period. After system adjustments, methane gas concentrations decreased to none detected.

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair. In addition, Monitoring Well Nos. 9 and 43 could not be located by the end of the reporting period due to being buried during on-site repair work performed by others. Finally, Monitoring Well No. 39 was observed to be plugged during the entire reporting period. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated no methane gas concentrations was detected beneath the storage containers.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 64 to 134 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare

Mr. George Cosby  
April 27, 1994  
Page Four

temperature observed for the month was 1573 degrees Fahrenheit. All other operating parameters remained within the prescribed limits. No unscheduled BFS shut-downs were reported during the reporting period.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

As previously reported, the condensate return pump flow totalizer (measured in gallons) appeared to have malfunctioned. SCS-FS received and installed the repaired totalizer during the previous reporting period. Operation of this instrument was still erratic. During this reporting period, the manufacturer completed troubleshooting and repairs on March 22, 1994. In addition, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-30, W-31, W-32, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

Mr. George Cosby  
April 27, 1994  
Page Five

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between MW-3B through MW-7, MW-1, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Finally, vegetation overgrowth has been observed in the vicinity of Extraction Well Nos. W-18, W-20, W-21, W-28, W-28A, W-28B, and W-31 through W-33. **SCS-FS recommends this vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in April 1994.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

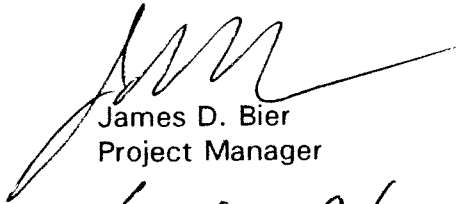
This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Mr. George Cosby  
April 27, 1994  
Page Six

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/01/94	P-1	NO	17.0	2.0	-0.31	-0.02	73	2.0	
03/01/94	P-2	NO	14.0	4.0	-0.31	0.02	77	2.4	
03/01/94	P-3	NO	19.0	NO	-0.31	0.04	76	1.0	
03/01/94	P-4	NO	15.0	3.0	-0.31	0.02	78	1.6	
03/01/94	P-5	NO	20.0	NO	-0.31	0.03	81	1.5	
03/01/94	P-6	NO	17.0	1.0	-0.31	NO	82	NO	
03/01/94	P-7	NO	12.0	6.0	-0.31	NO	87	NO	
03/01/94	P-8	NO	16.0	4.0	-0.31	NO	89	NO	
03/01/94	P-9	NO	20.0	NO	-0.31	0.04	86	1.5	
03/01/94	P-10	NO	18.0	2.0	-0.31	NO	82	NO	
03/01/94	P-11	NO	13.0	3.0	-0.31	NO	83	NO	
03/01/94	P-12	NO	18.0	1.0	-0.31	0.02	74	2.4	
03/01/94	P-13	ND	20.0	NO	-0.31	0.02	82	1.6	
03/01/94	P-13A	NO	4.0	16.0	-0.30	0.01	82	1.5	
03/01/94	P-14	NO	17.0	3.0	-0.31	NO	84	NO	
03/01/94	P-15	NO	16.0	2.0	-0.31	0.01	83	0.8	
03/01/94	P-16	NO	18.0	3.0	-0.31	NO	87	NO	
03/01/94	P-17	NO	8.0	9.0	-0.31	-0.01	88	1.0	
03/01/94	P-18	NO	14.0	5.0	-0.31	0.02	86	2.4	
03/01/94	P-19	NO	13.0	3.0	-0.31	-0.04	86	5.6	
03/01/94	P-20	NO	17.0	2.0	-0.31	0.02	85	2.4	
03/01/94	P-21	3.0	10.0	10.0	-0.31	-0.17	97	19.2	
03/01/94	P-22	NO	18.0	2.0	-0.31	0.04	83	4.8	
03/01/94	P-23	NO	15.0	3.0	-0.31	0.04	84	3.2	
03/01/94	P-24	12.0	6.0	18.0	-0.32	-0.15	107	66.4	
03/01/94	P-25	7.0	10.0	12.0	-0.32	-0.21	119	83.2	
03/01/94	P-26	1.0	16.0	4.0	-0.32	-0.14	106	31.2	ADJUSTED TO -0.02

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/01/94	P-27	ND	18.0	1.0	-0.34	0.05	84	4.8	
03/01/94	P-28	14.0	2.0	23.0	-0.31	-0.10	131	34.4	
03/01/94	P-29	4.0	9.0	12.0	-0.31	-0.11	126	40.8	
03/01/94	P-30	8.0	8.0	15.0	-0.30	-0.12	118	53.6	
03/01/94	P-31	0.3	12.0	7.0	-0.30	-0.08	98	33.6	
03/01/94	P-32	0.3	17.0	3.0	-0.30	-0.01	91	2.4	
03/01/94	P-33	ND	12.0	2.0	-0.30	0.08	88	1.6	
03/01/94	P-34	ND	11.0	3.0	-0.28	0.06	91	0.8	
03/01/94	P-35	5.0	8.0	13.0	-0.28	-0.02	109	6.4	
03/01/94	P-36	8.0	7.0	15.0	-0.28	-0.02	119	8.8	
03/01/94	P-37	ND	17.0	2.0	-0.28	ND	84	ND	
03/01/94	P-38	0.6	0.7	19.0	-0.28	0.08	86	1.6	
03/01/94	P-39	ND	17.0	4.0	-0.28	0.11	84	2.4	
03/01/94	W-1	15.0	0.5	27.0	-0.26	-0.21	93	224.2	
03/01/94	W-2	11.0	0.3	27.0	-0.24	-0.04	77	24.7	
03/01/94	W-3	43.0	0.3	38.0	-0.24	-0.21	76	101.6	
03/01/94	W-4	32.0	0.3	34.0	-0.26	-0.19	80	59.2	
03/01/94	W-5	14.0	4.1	18.0	-0.24	-0.03	74	8.8	
03/01/94	W-6	12.0	2.4	28.0	-0.26	-0.22	78	150.1	
03/01/94	W-7	49.0	1.6	36.0	-0.26	-0.24	81	64.8	
03/01/94	W-8	18.0	0.3	26.0	-0.26	-0.18	85	40.8	
03/01/94	W-9	12.0	4.6	24.0	-0.30	-0.06	76	55.1	
03/01/94	W-10	19.0	0.4	26.0	-0.34	-0.10	72	53.2	
03/01/94	W-11	21.0	1.3	28.0	-0.39	-0.08	73	39.9	
03/01/94	W-12	ND	20.6	ND	-0.43	ND	67	ND	
03/01/94	W-13	18.0	1.2	24.0	-0.48	-0.02	71	11.4	
03/01/94	W-14	14.0	1.3	23.0	-0.54	-0.03	118	13.3	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Per Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/01/94	W-15	3.0	18.0	2.0	-0.56	-0.29	64	134.9	
03/01/94	W-16	30.0	0.3	32.0	-1.10	-0.39	88	81.7	
03/01/94	W-17	31.0	0.3	30.0	-1.10	-0.21	74	53.2	
03/01/94	W-18	23.0	0.3	28.0	-1.10	-0.31	78	58.9	
03/01/94	W-20	30.0	0.4	31.0	-1.00	-0.36	76	70.3	
03/01/94	W-21	41.0	0.3	32.0	-1.00	-0.64	104	38.4	ADJUSTED TO -0.94
03/01/94	W-23	37.0	0.3	35.0	-33.00	-1.90	68	186.2	ADJUSTED TO -2.30
03/01/94	W-24	36.0	3.9	31.0	-32.00	-0.14	72	74.1	
03/01/94	W-25	56.0	0.3	42.0	-32.00	-23.50	74	215.2	
03/01/94	W-26	8.0	2.9	14.0	-32.00	-0.17	83	72.2	
03/01/94	W-27	52.0	0.4	42.0	-33.00	-9.35	92	564.3	ADJUSTED TO -10.1
03/01/94	W-28	22.0	1.4	28.0	-32.00	-0.46	74	72.2	
03/01/94	W-28A	36.0	0.4	37.0	-31.00	-1.50	134	98.4	
03/01/94	W-28B	31.0	0.9	28.0	-31.00	-0.35	118	140.6	
03/01/94	W-29	28.0	3.6	26.0	-31.00	-2.40	119	248.9	ADJUSTED TO -1.60
03/01/94	W-29A	NO	2.4	15.0	-22.00	-0.12	68	3.8	
03/01/94	W-30	44.0	0.6	36.0	-31.00	-15.00	71	291.2	HEAVY SURGING
03/01/94	W-31	54.0	0.3	41.0	-31.00	-29.00	92	220.8	
03/01/94	W-32	36.0	0.3	32.0	-31.00	0.20	72	17.6	ADJUSTED TO -0.58
03/01/94	W-33	28.0	1.4	26.0	-32.00	-11.00	108	355.3	
03/01/94	W-36	38.0	1.3	34.0	-32.00	-16.50	110	549.1	
03/01/94	W-37	28.0	2.1	29.0	-32.00	-16.00	96	615.6	
03/01/94	W-37A	12.0	NO	21.0	-15.00	-0.11	82	14.4	
03/01/94	W-37B	NT	NT	NT	NT	NT	NT	NO	INACCESSIBLE; COVERED WITH GRAVEL
03/01/94	W-38	NO	20.0	NO	-32.00	-31.00	71	172.9	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:		56.0	20.6	42.0			134	615.6	
Minimum:		0.0	0.0	0.0			0	0.0	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1



**SCS FIELD SERVICES**

May 31, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities, North Hollywood, California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of April 1 through 30, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- With the exception of Monitoring Well Nos. 11B, 40, 41, and 42 (up to 2.5 percent on April 1, 1994), no methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair.
- Monitoring Well No. 39 was plugged during the majority of the reporting period.
- Monitoring Well Nos. 9 and 43 could not be located during the entire reporting period.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-36, and W-38.
- Surface cracks were observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).

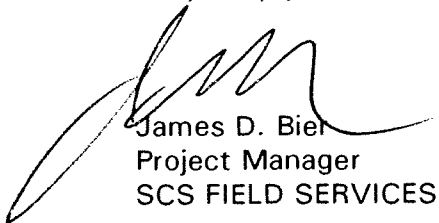


Mr. George Cosby  
May 31, 1994  
Page Two

- During the entire reporting period, Extraction Well No. 37B was inaccessible due to being buried by others.
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of Extraction Well No. W-15, W-18, W-28, W-28A, W-28B, W-31 through W-33, and Monitoring Well Nos. 24 through 30.
- The quarterly site observation was performed with only minor repairs being conducted.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Biel  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

May 31, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of April 1 through 30, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.



### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well No. 11B, 40, 41, and 42 (2.5 percent by volume), all monitoring wells tested exhibited no methane gas detected throughout the reporting period. After system adjustments, all methane gas concentrations, with the exception of Monitoring Well No. 42 (1 percent by volume) had decreased to none detected.

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair. In addition, Monitoring Well Nos. 9 and 43 could not be located due to being buried during on-site repair work performed by others. Finally, Monitoring Well No. 39 was observed to be plugged during the majority of the reporting period. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated no methane gas concentrations was detected beneath the storage containers.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 61 to 132 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During the entire reporting period, Extraction Well No. 37B was inaccessible due to being buried by others. **SCS-FS recommends that this well be located as soon as possible.**

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1573 degrees Fahrenheit. All other operating parameters remained within the prescribed limits. No unscheduled BFS shut-downs were reported during the reporting period.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

As previously reported, the condensate return pump flow totalizer (measured in gallons) appeared to have malfunctioned. SCS-FS received and installed the repaired totalizer during the previous reporting period. Operation of this instrument was still erratic. During this reporting period, the manufacturer completed troubleshooting and repairs on March 22, 1994. In addition, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-30, W-31, W-32, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Finally, vegetation overgrowth has been observed in the vicinity of Extraction Well Nos. W-15, W-18, W-28, W-28A, W-28B, W-31 through W-33 and Monitoring Well Nos. 24 through 30. **SCS-FS recommends this vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. On April 12, 1994, these quarterly activities were completed and are discussed below. The next quarterly site observation is scheduled to be conducted in July 1994.

During the quarterly activities, SCS-FS completed minor repairs to key LFG collection system components as required.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

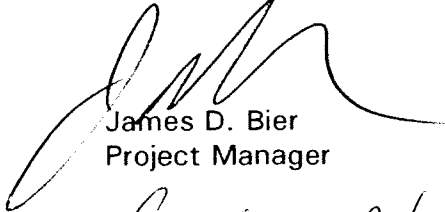
This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

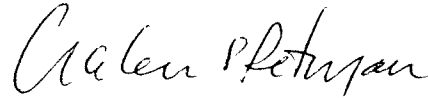
Mr. George Cosby  
May 31, 1994  
Page Six

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
04/05/94	P-1	ND	19.0	ND	-0.28	-0.22	78	12.0	
04/05/94	P-2	ND	15.0	3.0	-0.28	ND	67	ND	
04/05/94	P-3	ND	19.0	ND	-0.28	-0.20	66	14.5	
04/05/94	P-4	ND	20.0	ND	-0.28	-0.02	67	1.6	
04/05/94	P-5	ND	19.0	ND	-0.28	-0.15	73	3.0	
04/05/94	P-6	ND	19.0	ND	-0.28	-0.08	72	3.0	
04/05/94	P-7	ND	19.0	0.3	-0.28	-0.05	74	3.5	
04/05/94	P-8	ND	18.0	1.0	-0.28	-0.02	73	0.8	
04/05/94	P-9	ND	19.0	ND	-0.28	-0.22	72	8.0	
04/05/94	P-10	ND	19.0	ND	-0.28	-0.03	73	1.6	
04/05/94	P-11	ND	14.0	4.0	-0.28	-0.05	71	3.2	
04/05/94	P-12	ND	19.0	ND	-0.28	-0.03	68	1.6	
04/05/94	P-13	ND	19.0	ND	-0.28	-0.03	74	1.6	
04/05/94	P-13A	ND	4.8	13.0	-0.28	-0.02	71	1.0	
04/05/94	P-14	ND	19.0	ND	-0.28	-0.07	73	1.5	
04/05/94	P-15	ND	19.0	ND	-0.28	-0.01	74	ND	
04/05/94	P-16	ND	19.0	ND	-0.28	-0.06	76	1.6	
04/05/94	P-17	ND	19.0	0.3	-0.28	ND	72	ND	
04/05/94	P-18	ND	19.0	ND	-0.28	-0.18	72	15.2	
04/05/94	P-19	ND	18.0	0.8	-0.28	ND	77	1.6	
04/05/94	P-20	ND	17.0	2.8	-0.28	-0.18	74	23.2	
04/05/94	P-21	ND	19.0	ND	-0.28	-0.05	74	3.2	
04/05/94	P-22	1.5	11.0	8.0	-0.28	-0.23	101	37.6	
04/05/94	P-23	ND	19.0	ND	-0.28	-0.03	74	0.8	
04/05/94	P-24	9.0	7.0	15.0	-0.30	-0.17	104	20.8	
04/05/94	P-25	7.0	9.0	13.0	-0.30	-0.18	109	32.8	
04/05/94	P-26	ND	17.0	1.7	-0.32	-0.06	98	14.4	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
04/05/94	P-27	ND	19.0	0.1	-0.32	-0.02	70	1.6	
04/05/94	P-28	9.5	2.7	21.0	-0.28	-0.16	131	40.8	
04/05/94	P-29	4.2	11.0	10.0	-0.28	-0.14	108	58.4	
04/05/94	P-30	9.9	6.0	17.0	-0.28	-0.14	121	47.2	
04/05/94	P-31	1.1	13.0	6.8	-0.28	-0.14	81	53.6	
04/05/94	P-32	ND	16.0	2.7	-0.28	-0.08	74	32.8	
04/05/94	P-33	ND	16.0	2.8	-0.28	-0.02	73	2.4	
04/05/94	P-34	ND	11.0	7.7	-0.28	0.02	74	0.8	
04/05/94	P-35	2.7	9.0	11.0	-0.28	-0.02	96	1.6	
04/05/94	P-36	4.0	8.0	12.0	-0.28	-0.08	98	5.6	
04/05/94	P-37	ND	19.0	0.4	-0.26	-0.07	78	2.4	
04/05/94	P-38	ND	5.0	13.0	-0.26	ND	74	ND	
04/05/94	P-39	ND	19.0	ND	-0.26	ND	73	ND	
04/05/94	W-1	15.0	0.5	25.0	-1.50	-0.29	81	83.6	
04/05/94	W-2	10.0	0.4	220.0	-1.50	-0.32	70	74.1	ADJUSTED TO -0.11
04/05/94	W-3	30.0	0.3	33.0	-1.50	-0.80	74	105.6	
04/05/94	W-4	24.0	0.3	27.0	-1.40	-0.34	84	39.2	
04/05/94	W-5	21.0	0.7	27.0	-1.20	-0.58	107	60.8	ADJUSTED TO -0.24
04/05/94	W-6	14.0	5.0	20.0	-1.30	-0.17	76	53.2	ADJUSTED TO -0.08
04/05/94	W-7	44.0	0.3	34.0	-1.30	-0.96	86	71.2	ADJUSTED TO -1.25
04/05/94	W-8	12.0	0.3	24.0	-1.30	-0.25	71	28.8	ADJUSTED TO -0.12
04/05/94	W-9	17.0	0.2	25.0	-1.30	-0.26	72	140.6	ADJUSTED TO -0.17
04/05/94	W-10	16.0	0.3	24.0	-1.30	-0.22	70	91.2	
04/05/94	W-11	18.0	0.4	26.0	-1.30	-0.34	72	129.2	ADJUSTED TO -0.22
04/05/94	W-12	14.0	0.9	24.0	-1.40	-0.48	68	115.9	ADJUSTED TO -0.12
04/05/94	W-13	16.0	1.6	26.0	-1.40	-0.26	88	106.4	ADJUSTED TO -0.16
04/05/94	W-14	10.0	2.5	20.0	-1.40	-0.25	128	68.4	ADJUSTED TO -0.14

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
04/05/94	W-15	0.2	19.5	0.2	-1.40	-0.06	67	22.8	
04/05/94	W-16	23.0	2.1	26.0	-1.60	-0.66	86	72.2	
04/05/94	W-17	28.0	1.3	28.0	-1.60	-0.28	61	55.1	
04/05/94	W-18	20.0	0.3	26.0	-1.70	-0.46	64	58.9	
04/05/94	W-20	32.0	0.2	31.0	-1.30	-0.45	65	55.1	
04/05/94	W-21	37.0	0.5	32.0	-1.30	-1.20	101	36.8	
04/05/94	W-23	37.0	0.3	34.0	-34.0	-2.20	71	340.1	ADJUSTED TO -2.50
04/05/94	W-24	41.0	0.7	33.0	-32.0	0.08	62	20.9	ADJUSTED TO -0.54
04/05/94	W-25	56.0	0.5	41.0	-32.0	-0.18	85	175.2	
04/05/94	W-26	6.0	5.0	16.0	-32.0	-0.26	74	91.2	
04/05/94	W-27	53.0	0.4	40.0	-34.0	-3.50	91	549.1	ADJUSTED TO -5.60
04/05/94	W-28	24.0	1.1	27.0	-32.0	-0.63	64	77.9	
04/05/94	W-28A	38.0	0.3	34.0	-32.0	-1.80	132	174.4	ADJUSTED TO -2.70
04/05/94	W-28B	32.0	0.8	30.0	-32.0	-0.47	103	74.1	
04/05/94	W-29	34.0	2.3	30.0	-32.0	-1.60	109	376.2	
04/05/94	W-29A	0.3	1.5	15.5	-32.0	-0.17	64	32.3	
04/05/94	W-30	42.0	0.5	34.0	-32.0	-2.50	64	98.4	ADJUSTED TO -4.00
04/05/94	W-31	55.0	0.3	38.0	-32.0	-30.5	93	213.6	
04/05/94	W-32	30.0	ND	29.0	-32.0	-0.24	64	24.8	
04/05/94	W-33	24.0	3.2	26.0	-32.0	-11.6	110	235.6	
04/05/94	W-36	41.0	1.1	34.0	-32.0	-16.5	109	406.6	
04/05/94	W-37	28.0	2.0	28.0	-32.0	-14.5	91	440.8	
04/05/94	W-37A	9.0	1.6	21.0	-15.0	-0.11	101	18.4	
04/05/94	W-37B	NT	NT	NT	NT	NT	0	ND	INACCESSIBLE
04/05/94	W-38	0.7	18.0	0.9	-32.0	-30.0	68	566.2	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

**SCS FIELD SERVICES**

June 30, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of May 1 through 31, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- With the exception of Monitoring Well No. 40 (up to 1.1 percent), no methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair.
- Monitoring Well No. 39 was plugged during the majority of the reporting period.
- Monitoring Well Nos. 9 and 43 could not be located during the entire reporting period.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-36, and W-38.
- Surface cracks were observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).



## SCS FIELD SERVICES

June 30, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of May 1 through 31, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.




Mr. George Cosby  
June 30, 1994  
Page Two

- During the entire reporting period, Extraction Well No. 37B was inaccessible due to being buried by others.
- During our routine monthly testing, Extraction Well No. 38 was found capped off due to grading work being performed by others.
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of Extraction Well No. W-15, W-18, W-28, W-28A, W-28B, W-31 through W-33, and Monitoring Well Nos. 1 through 8A and 24 through 30.
- The quarterly site observation was performed with only minor repairs being conducted.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

Mr. George Cosby  
June 30, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well No. 40 (1.1 percent by volume), all monitoring wells tested exhibited no methane gas detected throughout the reporting period. System adjustments have not been able to consistently control LFG migration at this monitoring well. Repairs to the collection system in this area are scheduled for June 1994.

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair. In addition, Monitoring Well Nos. 9 and 43 could not be located due to being buried during on-site repair work performed by others. Finally, Monitoring Well No. 39 was observed to be plugged during the majority of the reporting period. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Mr. George Cosby  
June 30, 1994  
Page Three

Test results beneath these structures indicated no methane gas concentrations was detected beneath the storage containers.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 58 to 130 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During the entire reporting period, Extraction Well No. 37B was inaccessible due to being buried by others. During routine testing, Extraction Well No. 38 was found to be temporarily capped off during grading activities being performed by others. **SCS-FS recommends that these wells be located and reconnected as soon as possible.**

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

Mr. George Cosby  
June 30, 1994  
Page Four

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1570 degrees Fahrenheit. All other operating parameters remained within the prescribed limits. No unscheduled BFS shut-downs were reported during the reporting period.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-30, W-31, W-32, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

Mr. George Cosby  
June 30, 1994  
Page Five

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Finally, vegetation overgrowth has been observed in the vicinity of Extraction Well Nos. W-15, W-18, W-28, W-28A, W-28B, W-31 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. **SCS-FS recommends this vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in July 1994.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

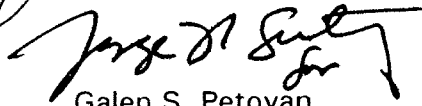
Mr. George Cosby  
June 30, 1994  
Page Six

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,

A handwritten signature in black ink, appearing to read 'James D. Bier', written over the typed name.

James D. Bier  
Project Manager

A handwritten signature in black ink, appearing to read 'Galen S. Petoyan', written over the typed name.

Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/03/94	P-1	ND	17.5	2.0	-0.18	-0.06	77	3.5	
05/03/94	P-2	ND	16.5	3.5	-0.18	ND	75	ND	
05/03/94	P-3	ND	18.0	2.0	-0.18	ND	67	ND	
05/03/94	P-4	ND	21.0	ND	-0.18	ND	71	ND	
05/03/94	P-5	ND	21.0	ND	-0.18	ND	80	ND	
05/03/94	P-6	ND	20.0	1.0	-0.18	ND	80	ND	
05/03/94	P-7	ND	16.5	3.5	-0.18	ND	77	ND	
05/03/94	P-8	ND	16.0	4.0	-0.18	ND	77	ND	
05/03/94	P-9	ND	15.0	4.0	-0.18	ND	73	ND	
05/03/94	P-10	ND	18.0	3.0	-0.20	ND	70	ND	
05/03/94	P-11	ND	15.5	4.0	-0.20	ND	70	ND	
05/03/94	P-12	ND	18.5	1.5	-0.20	ND	70	ND	
05/03/94	P-13	ND	21.0	ND	-0.20	ND	70	ND	
05/03/94	P-13A	ND	4.0	15.0	-0.22	ND	80	ND	
05/03/94	P-14	ND	21.0	ND	-0.20	ND	70	ND	
05/03/94	P-15	ND	18.0	2.0	-0.20	ND	67	ND	
05/03/94	P-16	ND	18.0	2.5	-0.20	ND	69	ND	
05/03/94	P-17	ND	13.0	6.0	-0.20	-0.12	76	ND	
05/03/94	P-18	ND	17.5	3.0	-0.20	ND	80	2.0	
05/03/94	P-19	ND	13.5	5.0	-0.20	-0.10	68	ND	
05/03/94	P-20	ND	19.0	2.0	-0.20	ND	63	ND	
05/03/94	P-21	2.0	11.0	9.0	-0.22	-0.18	100	10.4	
05/03/94	P-22	ND	19.0	2.0	-0.22	ND	65	ND	
05/03/94	P-23	ND	17.5	3.0	-0.22	ND	65	ND	
05/03/94	P-24	12.0	7.0	16.0	-0.20	-0.16	110		
05/03/94	P-25	11.0	10.0	14.0	-0.20	-0.25	117	13.6	
05/03/94	P-26	ND	19.0	2.0	-0.18	-0.07	92	9.2	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/03/94	P-27	ND	20.0	1.0	-0.16	ND	65	2.0	
05/03/94	P-28	15.0	3.0	22.0	-0.16	-0.12	130	15.2	
05/03/94	P-29	4.0	13.0	9.0	-0.14	-0.14	118	12.8	
05/03/94	P-30	9.0	7.5	16.0	-0.14	-0.16	120	12.8	
05/03/94	P-31	2.0	14.0	7.0	-0.12	ND	103	9.6	
05/03/94	P-32	ND	18.0	3.0	-0.12	-0.10	87	8.0	
05/03/94	P-33	ND	20.0	1.2	-0.12	ND	58	ND	
05/03/94	P-34	ND	19.0	2.4	-0.12	-0.02	60	ND	
05/03/94	P-35	0.6	12.0	8.0	-0.12	-0.08	103	8.0	
05/03/94	P-36	5.0	10.0	11.0	-0.12	-0.10	107	9.2	
05/03/94	P-37	ND	18.0	2.6	-0.12	-0.10	58	ND	
05/03/94	P-38	ND	13.0	7.0	-0.12	ND	58	ND	
05/03/94	P-39	ND	21.0	0.6	-0.12	-0.02	60	ND	
05/03/94	W-1	20.0	1.4	24.0	-1.16	-0.10	77	2.5	
05/03/94	W-2	15.5	1.4	24.0	NT	-0.08	70	10.5	
05/03/94	W-3	28.0	1.8	30.0	NT	-0.60	70	2.8	
05/03/94	W-4	22.0	1.5	26.0	NT	-0.27	95	10.0	
05/03/94	W-5	26.0	1.5	27.0	NT	0.01	80	2.0	
05/03/94	W-6	19.0	4.5	22.0	-1.14	-0.05	82	10.5	
05/03/94	W-7	36.0	1.8	32.0	NT	-1.07	95	9.6	ADJUSTED TO 90
05/03/94	W-8	14.0	0.4	26.0	NT	-0.06	76	3.6	
05/03/94	W-9	20.0	0.4	26.0	NT	-0.06	80	20.9	
05/03/94	W-10	18.0	0.4	26.0	-1.04	-0.10	80	22.8	
05/03/94	W-11	21.0	0.4	26.0	NT	-0.10	82	21.9	
05/03/94	W-12	14.0	0.7	27.0	NT	ND	77	ND	
05/03/94	W-13	16.0	2.0	24.0	-1.10	-0.23	90	20.9	
05/03/94	W-14	12.0	2.0	22.0	-1.18	ND	130	35.2	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/03/94	W-15	1.5	19.0	1.3	-1.20	-0.08	75	34.2	
05/03/94	W-16	29.0	1.3	32.0	-1.40	-0.47	106	35.2	
05/03/94	W-17	29.0	1.3	31.0	-1.40	-0.22	85	4.4	
05/03/94	W-18	22.0	0.8	28.0	-1.60	-0.49	102	49.4	
05/03/94	W-20	32.0	0.8	34.0	-1.20	-0.26	90	28.5	
05/03/94	W-21	31.0	1.2	30.0	-1.20	-1.00	108	38.4	
05/03/94	W-23	34.0	0.5	35.0	-36.0	-2.40	82	ND	
05/03/94	W-24	31.0	0.7	30.0	-31.0	0.07	87	43.7	ADJUSTED TO -1.10
05/03/94	W-25	52.0	0.9	42.0	-31.0	-25.0	100	26.0	
05/03/94	W-26	16.0	2.0	24.0	-30.0	NT	60	12.4	
05/03/94	W-27	50.0	0.4	42.0	-36.0	-3.60	94	ND	ADJUSTED TO -5.40
05/03/94	W-28	23.0	1.3	24.0	-36.0	-0.42	74	30.4	
05/03/94	W-28A	32.0	2.0	32.0	-30.0	-2.00	130	60.0	
05/03/94	W-28B	30.0	1.6	32.0	29.5	-0.25	110	95.0	
05/03/94	W-29	31.5	1.6	31.5	-33.0	-1.30	121	ND	
05/03/94	W-29A	ND	1.0	17.0	-31.0	-0.08	64	ND	
05/03/94	W-30	39.0	1.3	29.0	-31.0	-25.0	78	440.0	
05/03/94	W-31	50.0	0.8	39.0	-31.0	-27.0	107	20.0	
05/03/94	W-32	34.0	0.7	35.0	-31.0	ND	81	28.0	ADJUSTED TO -0.35
05/03/94	W-33	21.0	4.4	25.0	-31.0	-11.0	110	136.8	
05/03/94	W-36	40.0	1.0	34.0	-30.0	-18.0	109	237.5	
05/03/94	W-37	28.0	2.0	29.0	-30.0	-17.5	91	188.1	
05/03/94	W-37A	10.0	1.5	22.0	-13.5	-0.26	102	52.0	
05/03/94	W-38	NT	NT	NT	NT	NT	NT	NT	OUT OF SERVICE

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1



**SCS FIELD SERVICES**

July 29, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of June 1 through 30, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- With the exception of Monitoring Well No. 40 (up to 2.5 percent), no methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 12B, 13A, 13D, 15A, 16X, 17A, 29B, 29C, and 45 were lost (i.e., buried by work being conducted by others) during portions of the reporting period.
- Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair.
- Monitoring Well No. 39 was plugged during portions of the reporting period.
- Monitoring Well Nos. 9, 37, and 43 could not be located during the entire reporting period.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-36, and W-38.
- Surface cracks were observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).



Mr. George Cosby  
July 29, 1994  
Page Two

- During the entire reporting period, Extraction Well No. 37B was inaccessible due to being buried by others.
- During our routine monthly testing, Extraction Well No. 38 was found capped off due to grading work being performed by others.
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33, Monitoring Well Nos. 1 through 8A and 24 through 30. (Some landscaping work being conducted by others was observed at the end of the reporting period).
- On June 23, 1994, SCS-FS responded to a call-out to repair damage caused by on-going grading work being conducted by others.
- On June 27, 1994, site improvement work on L.A. Auto Salvage portion of the site commenced. Briefly, work included excavation and location of buried laterals serving Extraction Well Nos. 33 and 38. Work continued into July 1994.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,

A handwritten signature in cursive script, appearing to read "James D. Bier".

James D. Bier  
Project Manager  
SCS FIELD SERVICES

## SCS FIELD SERVICES

July 27, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of June 1 through 30, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.



Mr. George Cosby  
July 27, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well No. 40 (2.5 percent by volume), all monitoring wells tested exhibited no methane gas detected throughout the reporting period. System adjustments have not been able to consistently control LFG migration at this monitoring well. Repairs to the collection system in this area are scheduled to continue into July 1994.

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 38 and 38B were observed to be damaged and in need of repair. In addition, Monitoring Well Nos. 9, 12B, 13A, 13D, 15A, 16X, 17A, 29B, 29C, 37, 43, and 45 could not be located due to being buried during work being performed by others. Finally, Monitoring Well No. 39 was observed to be plugged during portions of the reporting period. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Mr. George Cosby  
July 27, 1994  
Page Three

Test results beneath these structures indicated no methane gas concentrations was detected beneath the storage containers.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 67 to 121 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During the entire reporting period, Extraction Well No. 37B was inaccessible due to being buried by others. During routine testing, Extraction Well No. 38 was found to be temporarily capped off during grading activities being performed by others. **SCS-FS recommends that these wells be located and reconnected as soon as possible.**

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

Mr. George Cosby  
July 27, 1994  
Page Four

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1570 degrees Fahrenheit. All other operating parameters remained within the prescribed limits. No unscheduled BFS shut-downs were reported during the reporting period.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

On June 23, 1994, SCS-FS responded to a call-out to repair damage caused by others during on-going site grading activities. Repairs were completed without incident. It should be noted that the BFS remained operational during the repair.

On June 1994, SCS-FS commenced site improvement on the L.A. Auto Salvage portion of the site. Briefly, work included excavation and location of buried header lines serving Extraction Well Nos. 33 and 38. In addition, the lateral serving Extraction Well 29 work continued into July 1994.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-30, W-31, W-32, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

Mr. George Cosby  
July 27, 1994  
Page Five

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Finally, vegetation overgrowth has been observed in the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. During the end of the reporting period, SCS-FS observed landscaping work being performed by others. **SCS-FS recommends the remaining vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in July 1994.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions


This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Mr. George Cosby  
July 27, 1994  
Page Six

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,

A handwritten signature in cursive script, appearing to read "James D. Bier".

James D. Bier  
Project Manager

A handwritten signature in cursive script, appearing to read "Galen S. Petoyan".

Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
06/14/94	P-1	ND	16.1	0.4	-0.22	-0.09	71	9.5	
06/14/94	P-2	ND	14.9	1.3	-0.22	-0.03	72	3.2	
06/14/94	P-3	ND	16.8	ND	-0.22	-0.10	73	4.5	
06/14/94	P-4	ND	16.8	ND	-0.22	-0.01	71	ND	
06/14/94	P-5	ND	16.6	ND	-0.22	-0.04	74	1.0	
06/14/94	P-6	ND	16.8	ND	-0.22	-0.03	74	1.5	
06/14/94	P-7	ND	15.6	0.8	-0.22	-0.02	72	0.5	
06/14/94	P-8	ND	14.0	1.7	-0.22	-0.01	73	ND	
06/14/94	P-9	ND	16.2	0.2	-0.22	-0.13	76	6.5	
06/14/94	P-10	ND	14.8	1.7	-0.22	-0.03	74	2.4	
06/14/94	P-11	ND	12.4	2.8	-0.22	-0.03	76	0.8	
06/14/94	P-12	ND	16.6	ND	-0.22	-0.04	75	3.2	
06/14/94	P-13	ND	16.6	ND	-0.22	-0.07	75	5.6	
06/14/94	P-13A	ND	2.7	17.0	-0.24	+0.01	70	1.0	
06/14/94	P-14	ND	16.6	ND	-0.22	-0.03	74	1.5	
06/14/94	P-15	ND	15.6	0.7	-0.22	-0.10	71	8.8	
06/14/94	P-16	ND	16.6	0.1	-0.22	-0.03	71	0.8	
06/14/94	P-17	ND	15.0	1.3	-0.24	-0.18	73	14.0	
06/14/94	P-18	ND	16.3	0.2	-0.24	-0.03	72	0.8	
06/14/94	P-19	ND	13.2	2.6	-0.24	-0.14	73	22.4	
06/14/94	P-20	ND	16.6	ND	-0.24	-0.03	72	1.6	
06/14/94	P-21	2.4	8.6	10.0	-0.24	-0.19	84	24.8	
06/14/94	P-22	ND	16.4	0.1	-0.24	-0.02	72	0.8	
06/14/94	P-23	ND	16.3	0.5	-0.24	-0.04	71	2.4	
06/14/94	P-24	12.7	5.2	18.6	-0.24	-0.16	83	33.6	
06/14/94	P-25	8.6	8.0	14.2	-0.266	-0.22	90	42.4	
06/14/94	P-26	ND	15.4	1.3	-0.26	-0.08	73	5.6	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
06/14/94	P-27	ND	16.7	ND	-0.26	-0.08	70	4.8	
06/14/94	P-28	1.9	6.5	12.3	-0.22	-0.16	96	29.6	
06/14/94	P-29	ND	15.5	1.3	-0.22	-0.15	69	19.2	
06/14/94	P-30	0.4	10.4	7.6	-0.22	-0.15	76	24.8	
06/14/94	P-31	0.2	12.0	5.6	-0.22	-0.06	72	4.8	
06/14/94	P-32	0.1	12.7	4.8	-0.22	-0.09	72	3.2	
06/14/94	W-1	22.3	1.0	27.3	-1.20	-0.12	70	20.9	
06/14/94	W-2	17.7	1.0	25.9	-1.10	-0.04	73	7.6	
06/14/94	W-3	30.6	1.0	32.6	-1.10	-0.61	74	24.8	
06/14/94	W-4	27.0	0.8	29.0	-1.10	-0.21	72	18.4	
06/14/94	W-5	29.8	0.6	30.1	-1.10	-0.08	71	10.4	
06/14/94	W-6	20.6	4.8	22.9	-1.10	-0.02	74	5.7	
06/14/94	W-7	49.3	0.8	36.2	-1.10	-0.20	75	14.4	ADJUSTED TO -0.68
06/14/94	W-8	18.7	0.8	27.7	-1.10	-0.06	72	11.2	
06/14/94	W-9	21.1	1.2	26.7	-1.20	-0.06	68	15.2	
06/14/94	W-10	18.1	1.0	26.3	-1.20	-0.10	69	20.9	
06/14/94	W-11	21.2	1.6	26.8	-1.30	-0.15	71	22.8	
06/14/94	W-12	16.7	0.8	26.9	-1.30	-0.30	71	3.8	
06/14/94	W-13	17.4	1.6	24.4	-1.40	-0.02	72	7.6	
06/14/94	W-14	12.3	2.0	21.9	-1.40	-0.09	118	15.2	
06/14/94	W-15	ND	16.7	ND	-1.50	-0.04	71	22.8	
06/14/94	W-16	24.6	0.4	30.0	-1.80	-0.60	96	41.8	
06/14/94	W-17	25.5	1.8	27.3	-1.80	-0.37	72	14.4	
06/14/94	W-18	19.9	0.8	27.4	-1.80	-0.49	90	53.2	
06/14/94	W-20	31.7	0.4	33.2	-1.80	-0.38	74	43.7	
06/14/94	W-21	35.8	1.0	34.8	-1.80	-1.14	98	36.8	
06/14/94	W-23	39.1	0.3	35.4	-35.0	-2.16	69	229.9	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
06/14/94	W-24	16.6	4.4	21.1	-34.5	-16.27	101	52.3	
06/14/94	W-25	55.7	0.4	43.0	-34.5	-31.03	96	64.0	
06/14/94	W-26	15.1	1.9	24.9	-34.0	-0.31	74	22.8	
06/14/94	W-27	53.7	0.3	42.2	-35.0	-0.82	94	70.3	
06/14/94	W-28	27.6	0.5	30.3	-35.0	-0.48	71	34.2	
06/14/94	W-28A	30.0	2.9	30.1	-34.5	-2.21	120	55.2	
06/14/94	W-28B	33.2	0.8	32.7	-34.5	-0.18	71	39.9	
06/14/94	W-29	35.2	1.7	31.8	-32.0	-1.45	104	79.8	
06/14/94	W-29A	0.2	1.5	15.4	-32.0	-0.12	71	12.9	
06/14/94	W-30	41.5	0.6	34.5	-34.5	-26.51	85	500.0	
06/14/94	W-31	52.3	0.6	38.8	-34.5	-22.96	96	31.2	
06/14/94	W-32	29.4	0.2	30.0	-34.5	-0.27	84	11.2	
06/14/94	W-33	24.1	3.6	25.4	-35.0	-9.44	113	138.7	
06/14/94	W-36	39.5	1.9	34.0	-34.0	-16.77	84	248.9	
06/14/94	W-37	27.0	3.2	28.0	-34.0	-13.89	99	153.9	
06/14/94	W-37A	10.2	1.7	22.8	-14.5	-0.22	104	22.4	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1



## SCS FIELD SERVICES

August 31, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities, North Hollywood, California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of July 1 through 31, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 9, 12B, 13A, 13D, 15A, 16X, 17A, 29B, 29C, 35, 37, 38, 38B, and 43 were lost and/or damaged (i.e., buried by work being conducted by others) during portions of the reporting period.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-36, and W-38.
- Surface cracks were observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.

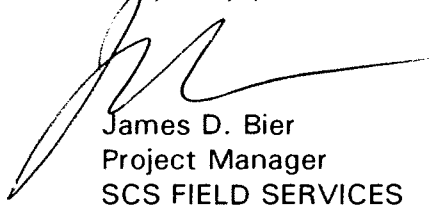


Mr. George Cosby  
August 31, 1994  
Page Two

- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33, Monitoring Well Nos. 1 through 8A and 24 through 30. (Some landscaping work being conducted by others was observed during the reporting period).
- On July 19, 1994, SCS-FS responded to a call-out to switch out the condensate return pump.
- On July 11, 1994, site improvement work on L.A. Auto Salvage portion of the site were completed. Briefly, work included excavation and location of buried laterals serving several extraction wells and relocation/modification of the main 10-inch header located on the LA Auto Salvage/Desmond border.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

August 31, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of July 1 through 31, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.



Mr. George Cosby  
August 31, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

All monitoring wells tested exhibited no methane gas detected throughout the reporting period. System adjustments have not been able to consistently control LFG migration at this monitoring well. Repairs to the collection system in this area are scheduled to continue into July 1994.

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 9, 12B, 13A, 13D, 15A, 16X, 17A, 29B, 29C, 35, 37, 38, 38B, and 43 could not be located due to being buried during work being performed by others. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated no methane gas concentrations was detected beneath the storage containers.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 69 to 131 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1572 degrees Fahrenheit. All other operating parameters remained within the prescribed limits.

At the request of Cal Mat, SCS-FS switched out the LFG condensate return pump located at the BFS. The level flow controls for the condensate handling system were checked for proper operation and appeared to be operating satisfactorily.

Mr. George Cosby  
August 31, 1994  
Page Four

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

On July 11, 1994, SCS-FS completed site improvement on the L.A. Auto Salvage portion of the site. Briefly, work included excavation and location of buried header lines. In addition, the main 10-inch header line located at the LA Auto Salvage/Desmond border.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of

Mr. George Cosby  
August 31, 1994  
Page Five

settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Finally, vegetation overgrowth has been observed in the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. During the reporting period, SCS-FS observed landscaping work being performed by others. **SCS-FS recommends the remaining vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in October 1994.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

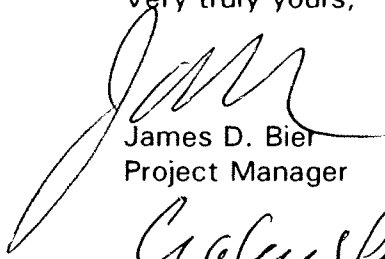
This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Mr. George Cosby  
August 31, 1994  
Page Six

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,

A handwritten signature in black ink, appearing to read 'JMB', written over the typed name and title of James D. Bier.

James D. Bier  
Project Manager

A handwritten signature in black ink, appearing to read 'Galen S. Petoyan', written over the typed name and title of Galen S. Petoyan.

Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
07/12/94	P-1	0.6	16.8	2.2	0.21	-0.10	83	4.5	
07/12/94	P-2	ND	16.9	2.0	0.21	0	85	ND	
07/12/94	P-3	ND	20.6	ND	0.21	0	81	ND	
07/12/94	P-4	ND	20.6	ND	0.21	0.02	81	0.8	
07/12/94	P-5	ND	20.6	ND	0.21	0	84	ND	
07/12/94	P-6	ND	20.6	ND	0.21	0.01	88	ND	
07/12/94	P-7	ND	15.9	2.1	0.21	0.01	88	0.5	
07/12/94	P-8	0.1	2.6	17.0	0.21	0	87	ND	
07/12/94	P-9	19.7	9.9	17.6	0.21	0	90	0.5	ADJUSTED TO -0.06
07/12/94	P-10	ND	18.9	0.7	0.21	0.02	89	1.6	
07/12/94	P-11	0.4	13.9	1.7	0.21	0.02	87	0.8	
07/12/94	P-12	ND	20.5	ND	0.21	0.05	86	3.2	
07/12/94	P-13	ND	20.7	ND	0.21	0.05	89	1.6	
07/12/94	P-13A	ND	4.4	14.4	0.21	-0.02	83	1.0	
07/12/94	P-14	ND	19.9	0.3	0.21	0	88	ND	
07/12/94	P-15	ND	17.4	1.2	0.21	0.02	87	1.6	
07/12/94	P-16	ND	17.2	1.7	0.21	0	91	ND	
07/12/94	P-17	2.1	12.5	2.4	-0.21	-0.05	93	4.0	
07/12/94	P-18	0.6	15.9	2.9	-0.21	ND	98	0.8	
07/12/94	P-19	0.5	16.0	1.8	-0.22	-0.04	92	9.6	
07/12/94	P-20	ND	18.1	1.6	-0.22	ND	88	ND	
07/12/94	P-21	2.1	10.3	9.9	-0.23	-0.16	99	33.6	
07/12/94	P-22	ND	18.9	0.8	-0.23	0.02	81	1.6	
07/12/94	P-23	ND	16.0	1.1	-0.23	0.01	83	0.8	
07/12/94	P-24	12.7	6.0	18.9	-0.24	-0.12	119	30.4	
07/12/94	P-25	8.0	10.0	13.7	-0.24	-0.22	117	40.8	
07/12/94	P-26	2.6	16.8	1.8	-0.24	-0.08	109	24.8	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
07/12/94	P-27	ND	20.6	ND	-0.24	0.01	88	0.8	
07/12/94	P-28	5.3	4.8	14.0	-0.22	-0.14	131	44.8	
07/12/94	P-29	4.2	14.6	4.9	-0.22	-0.19	108	29.6	
07/12/94	P-30	4.9	12.8	11.9	-0.20	-0.17	119	28.8	
07/12/94	P-31	6.4	12.9	8.8	-0.20	-0.04	107	16.8	
07/12/94	P-33	ND	20.2	1.1	-0.20	0.02	88	0.8	
07/12/94	P-34	ND	20.1	ND	-0.20	ND	85	ND	
07/12/94	P-35	2.1	12.6	12.8	-0.20	-0.07	106	11.2	
07/12/94	P-36	3.2	10.4	14.1	-0.20	-0.09	114	28.0	
07/12/94	P-37	ND	20.6	ND	-0.18	ND	86	ND	
07/12/94	P-38	ND	1.6	12.8	-0.18	ND	91	1.6	
07/12/94	P-39	ND	19.8	1.1	-0.18	ND	87	ND	
07/12/94	W-1	16.8	0.6	23.6	-1.20	-0.17	91	30.4	
07/12/94	W-2	12.6	0.6	23.9	-1.20	-0.01	87	3.8	
07/12/94	W-3	29.0	1.3	29.9	-1.20	-0.46	98	22.4	
07/12/94	W-4	23.7	0.4	26.6	-1.20	-0.23	87	23.2	
07/12/94	W-5	23.5	0.6	27.9	-1.20	-0.21	93	25.6	
07/12/94	W-6	16.1	4.4	21.7	-1.40	-0.10	86	11.4	
07/12/94	W-7	40.8	0.4	34.2	-1.40	-0.90	87	42.4	
07/12/94	W-8	12.9	0.4	25.7	-1.40	-0.10	92	8.0	
07/12/94	W-9	21.4	0.4	26.6	-1.40	-0.10	87	17.1	
07/12/94	W-10	16.5	0.3	25.6	-1.40	-0.12	85	22.8	
07/12/94	W-11	21.5	0.4	27.7	-1.50	-0.17	82	24.7	
07/12/94	W-12	14.5	0.5	26.6	-1.60	-0.55	76	89.3	
07/12/94	W-13	17.6	1.8	23.4	-1.60	-0.04	92	11.4	
07/12/94	W-14	13.0	1.6	23.0	-1.60	-0.02	131	3.8	
07/12/94	W-15	0.3	19.6	1.2	-1.60	-1.40	85	77.9	ADJUSTED TO -0.52

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
07/12/94	W-16	22.9	0.4	28.4	-1.70	-0.56	104	112.1	
07/12/94	W-17	23.3	2.4	25.7	-1.70	-0.48	82	17.1	
07/12/94	W-18	17.9	0.6	26.9	-1.70	-0.57	96	60.8	
07/12/94	W-20	29.3	0.3	31.7	-1.30	-0.39	91	68.4	
07/12/94	W-21	35.6	0.7	33.9	-1.30	-1.20	108	77.6	
07/12/94	W-23	40.2	0.1	36.7	-32.0	-1.95	69	212.8	
07/12/94	W-24	17.5	5.2	21.4	-32.0	-25.2	114	155.8	ADJUSTED TO -0.32
07/12/94	W-25	52.9	0.4	41.7	-32.0	-25.4	112	80.8	
07/12/94	W-26	19.2	2.6	25.0	-32.0	-0.34	76	38.0	
07/12/94	W-27	52.2	ND	41.7	-32.0	-3.90	104	343.9	ADJUSTED TO -5.10
07/12/94	W-28	42.3	ND	35.4	-31.0	-0.21	77	58.9	ADJUSTED TO -0.61
07/12/94	W-28A	44.4	0.2	37.2	-32.0	-0.78	127	60.0	ADJUSTED TTO -1.80
07/12/94	W-28B	41.7	0.3	31.1	-32.0	0.60	96	58.9	ADJUSTED TO -0.48
07/12/94	W-29	5.9	1.3	17.6	-30.0	-0.09	78	7.6	
07/12/94	W-29A	5.9	1.3	17.6	-30.0	-0.09	78	7.6	
07/12/94	W-30	26.9	1.2	29.7	-32.0	-9.50	102	76.8	
07/12/94	W-31	53.4	0.1	41.1	-32.0	-24.1	116	47.2	
07/12/94	W-32	34.7	ND	32.2	-32.0	-0.26	82	43.2	
07/12/94	W-33	26.6	2.0	27.8	-32.0	-6.50	101	112.1	ADJUSTED TO -5.00
07/12/94	W-36	42.9	0.6	36.6	-32.0	-16.0	111	222.3	
07/12/94	W-37	30.3	2.7	28.8	-32.0	-14.0	94	2072.9	ADJUSTED TO -10.0
07/12/94	W-37A	12.6	0.8	19.8	-10.0	-0.08	106	14.4	
07/12/94	W-38	ND	20.5	ND	-32.0	-30.0	71	17.1	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1



## SCS FIELD SERVICES

September 30, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of August 1 through 31, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 7A, 9, 12B, 13A, 13B, 13C, 13D, 29B, 29C, 35, 37, 38, 38B, and 43 were lost and/or damaged (i.e., buried by work being conducted by others) during portions or all of the reporting period.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-36, and W-38.
- Surface cracks were observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The in-line flow meter located at the BFS malfunctioned during the reporting period. The meter was removed, repaired, and reinstalled by others.



Mr. George Cosby  
September 30, 1994  
Page Two

- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33, Monitoring Well Nos. 1 through 8A and 24 through 30. (Some landscaping work being conducted by others was observed during the reporting period).

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

September 30, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of August 1 through 31, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.



### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

All monitoring wells tested exhibited no methane gas detected throughout the reporting period. Test locations are shown on Figure No. 1 (attached).

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 7A, 9, 12B, 13A, 13B, 13C, 13D, 29B, 29C, 35, 37, 38, 38B, and 43 could not be located due to being buried and/or damaged during work being performed by others. **SCS-FS recommends these monitoring wells be repaired and located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated no methane gas concentrations was detected beneath the storage containers.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 75 to 131 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1571 degrees Fahrenheit. All other operating parameters remained within the prescribed limits.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

During the reporting period, the in-line flow meter malfunctioned. This meter was removed by others and as of the date of this report has been repaired and reinstalled. No further malfunctions have been observed.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-36, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of

settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Finally, vegetation overgrowth has been observed in the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. During the reporting period, SCS-FS observed landscaping work being performed by others. **SCS-FS recommends the remaining vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in October 1994.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Mr. George Cosby  
September 30, 1994  
Page Six

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
08/02/94	P-1	ND	19.2	0.3	-0.07	-0.08	83	2.0	
08/02/94	P-2	ND	16.4	2.0	-0.06	ND	85	ND	
08/02/94	P-3	ND	20.1	ND	-0.06	0.05	88	3.5	
08/02/94	P-4	ND	20.3	ND	-0.06	ND	84	ND	
08/02/94	P-5	ND	20.3	ND	-0.06	ND	88	0.5	
08/02/94	P-6	ND	20.2	ND	-0.06	0.02	91	1.0	
08/02/94	P-7	ND	16.0	2.0	-0.06	ND	93	ND	
08/02/94	P-8	ND	18.3	1.3	-0.06	ND	94	0.8	
08/02/94	P-9	ND	18.2	2.0	-0.06	-0.04	93	1.5	
08/02/94	P-10	ND	18.7	0.7	-0.06	ND	91	ND	
08/02/94	P-11	ND	15.6	2.8	-0.06	ND	90	ND	
08/02/94	P-12	ND	19.1	0.4	-0.06	ND	87	ND	
08/02/94	P-13	ND	20.4	ND	-0.06	ND	95	0.8	
08/02/94	P-13A	ND	3.8	15.0	-0.06	-0.01	88	0.5	
08/02/94	P-14	ND	20.0	ND	-0.06	ND	98	ND	
08/02/94	P-15	ND	15.6	1.5	-0.06	ND	91	ND	
08/02/94	P-16	ND	17.9	1.0	-0.06	0.02	91	0.8	
08/02/94	P-17	ND	16.3	3.4	-0.06	-0.02	94	1.5	
08/02/94	P-18	ND	18.9	1.1	-0.06	0.01	90	0.8	
08/02/94	P-19	ND	16.7	1.8	-0.06	ND	92	ND	
08/02/94	P-20	ND	18.7	0.8	-0.06	ND	93	ND	
08/02/94	P-21	ND	9.7	9.2	-0.06	-0.03	96	3.2	
08/02/94	P-22	ND	18.4	0.7	-0.06	ND	94	ND	
08/02/94	P-23	ND	19.8	0.2	-0.24	-0.02	90	1.6	
08/02/94	P-24	9.3	7.0	17.0	-0.28	-0.19	108	31.2	
08/02/94	P-25	5.3	11.6	11.0	-0.28	-0.24	119	42.4	
08/02/94	P-26	ND	19.6	0.6	-0.28	-0.05	106	8.8	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
08/02/94	P-27	ND	20.7	ND	-0.30	-0.02	82	1.6	
08/02/94	P-28	3.2	4.5	16.0	-0.28	-0.16	131	19.2	
08/02/94	P-29	0.1	15.3	4.0	-0.26	-0.16	104	24.8	ADJUSTED TO -0.02
08/02/94	P-30	2.0	10.5	11.0	-0.26	-0.18	112	33.6	
08/02/94	P-31	ND	15.6	4.0	-0.26	-0.18	89	28.8	
08/02/94	P-32	ND	18.7	1.0	-0.26	-0.10	87	9.6	
08/02/94	P-33	ND	19.7	0.2	-0.26	-0.01	84	0.8	
08/02/94	P-34	ND	18.5	0.9	-0.24	-0.01	94	0.8	
08/02/94	P-35	ND	18.2	0.6	-0.24	-0.10	96	8.8	
08/02/94	P-36	ND	16.9	2.0	-0.24	-0.15	99	18.4	
08/02/94	P-37	ND	20.4	ND	-0.24	-0.09	94	7.2	ADJUSTED TO -0.01
08/02/94	P-38	ND	2.7	3.0	-0.24	ND	91	ND	
08/02/94	P-39	ND	19.6	0.2	-0.24	0.02	91	0.8	
08/02/94	W-1	11.8	0.7	24.0	-1.30	-0.17	102	34.2	
08/02/94	W-2	7.7	0.6	23.0	-1.30	-0.12	89	24.7	
08/02/94	W-3	19.7	2.3	29.0	-1.20	-0.52	91	ND	ADJUSTED TO -0.26
08/02/94	W-4	18.5	0.5	27.0	-1.20	-0.28	101	ND	ADJUSTED TO -0.17
08/02/94	W-5	18.2	0.8	27.0	-1.20	-0.09	96	7.2	
08/02/94	W-6	11.2	4.5	20.0	-1.20	-0.14	92	30.4	ADJUSTED TO -0.06
08/02/94	W-7	34.5	0.5	34.0	-1.20	-0.96	89	ND	
08/02/94	W-8	8.1	0.5	24.0	-1.20	-0.12	91	8.8	
08/02/94	W-9	16.0	0.5	27.0	-1.30	-0.11	88	20.9	
08/02/94	W-10	12.1	0.6	25.0	-1.40	-0.06	86	15.2	
08/02/94	W-11	16.2	0.5	27.0	-1.40	-0.11	91	22.8	
08/02/94	W-12	10.6	1.1	24.0	-1.50	-0.15	82	30.4	
08/02/94	W-13	14.4	2.0	24.0	-1.50	-0.02	103	1.9	
08/02/94	W-14	10.1	1.7	22.0	-1.70	-0.03	127	3.8	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
08/02/94	W-15	ND	19.0	0.9	-1.80	-0.75	89	12.4	ADJUSTED TO -0.38
08/02/94	W-16	23.0	0.5	31.0	-2.00	-0.51	106	96.9	
08/02/94	W-17	27.1	1.3	32.0	-1.90	-0.27	98	60.8	
08/02/94	W-18	28.2	1.1	31.0	-1.90	-0.24	89	55.1	
08/02/94	W-20	30.1	0.2	32.0	-1.40	-0.28	91	ND	
08/02/94	W-21	36.7	0.4	33.0	-1.40	-1.30	111	ND	
08/02/94	W-23	32.6	0.2	34.0	-32.0	-1.90	78	207.1	
08/02/94	W-24	33.3	0.6	32.0	-30.0	-0.08	119	43.7	
08/02/94	W-25	54.1	0.3	42.0	-30.0	-25.0	121	89.6	
08/02/94	W-26	14.4	3.0	23.0	-30.0	-0.56	86	72.2	
08/02/94	W-27	42.3	0.7	38.0	-32.0	-12.0	107	524.4	ADJUSTED TO -12.8
08/02/94	W-28	23.2	0.6	30.0	-30.0	-0.68	75	112.1	
08/02/94	W-28A	41.3	0.4	32.0	-30.0	-1.90	131	76.8	
08/02/94	W-28B	36.4	0.6	29.0	-30.0	-0.52	98	110.2	
08/02/94	W-29	33.7	1.6	31.0	-30.0	-0.65	82	148.2	
08/02/94	W-29A	4.3	1.6	16.0	-30.0	0.08	82	5.7	
08/02/94	W-30	28.1	1.1	32.0	-30.0	-8.00	104	71.2	
08/02/94	W-31	53.9	0.2	43.0	-30.0	-23.3	118	56.8	
08/02/94	W-32	36.7	ND	33.0	-30.0	-0.24	83	49.6	
08/02/94	W-33	28.1	1.4	28.0	-30.0	-5.50	103	127.3	
08/02/94	W-36	40.6	0.9	35.0	-30.0	-18.5	107	243.2	
08/02/94	W-37	29.7	2.0	30.0	-30.0	-8.60	94	184.3	
08/02/94	W-38	ND	20.2	ND	-30.0	-0.02	81	3.8	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1



## SCS FIELD SERVICES

October 28, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of September 1 through 30, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.


- With the exception of Monitoring Well No. 42 on September 20, 1994, (0.1 percent by volume), no methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 7, 9, 13A, 13D, 29B, 29C, 35, 37, 38, 38B, and 43 were lost and/or damaged (i.e., buried by work conducted by others) during the reporting period.
- Test results beneath on-site structures and storage containers indicated no methane gas was detected.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38.
- Surface cracks were observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).

Mr. George Cosby  
October 28, 1994  
Page Two

- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33, Monitoring Well Nos. 1 through 8A and 24 through 30. (Some landscaping work being conducted by others was observed during the reporting period).
- On September 13 and 20, 1994, South Coast Air Quality Management District (SCAQMD) conducted site inspections to determine compliance with Rule 1150.2. No violations were reported.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

October 28, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of September 1 through 30, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.

Mr. George Cosby  
October 28, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well No. 42 on September 20, 1994 (0.1 percent by volume), all monitoring wells tested exhibited no methane gas detected throughout the reporting period. Test locations are shown on Figure No. 1 (attached).

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 7, 9, 13A, 13D, 29B, 29C, 35, 37, 38, 38B, and 43 could not be located due to being buried and/or damaged by work performed by others. **SCS-FS recommends these monitoring wells be repaired and/or located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated no methane gas was detected.

Mr. George Cosby  
October 28, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Gastech Model 1939-OX Hydrocarbon Surveyor or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well No. 42 on September 20, 1994 (0.1 percent by volume), all monitoring wells tested exhibited no methane gas detected throughout the reporting period. Test locations are shown on Figure No. 1 (attached).

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 7, 9, 13A, 13D, 29B, 29C, 35, 37, 38, 38B, and 43 could not be located due to being buried and/or damaged by work performed by others. **SCS-FS recommends these monitoring wells be repaired and/or located as soon as possible.**

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath ~~these~~ structures indicated no methane gas ~~concentrations~~ was detected, ~~beneath the storage containers.~~

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 72 to 136 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1570 degrees Fahrenheit. All other operating parameters remained within the prescribed limits.

Mr. George Cosby  
October 28, 1994  
Page Four

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Mr. George Cosby  
October 28, 1994  
Page Five

Numerous small cracks were previously observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Vegetation overgrowth has been observed in the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. During the reporting period, SCS-FS observed landscaping work being performed by others. **SCS-FS recommends the remaining vegetation overgrowth be removed.**

On September 13 and 20, 1994, SCAQMD conducted a site inspection to determine compliance with Rule 1150.2. No violations were reported.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in October 1994.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions


This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

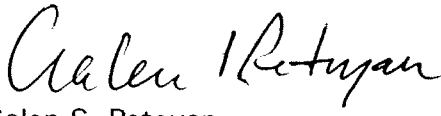
Mr. George Cosby  
October 28, 1994  
Page Six

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
09/06/94	P-1	ND	15.4	3.2	-0.05	-0.04	97	2.0	
09/06/94	P-2	ND	15.1	1.1	-0.05	0.01	98	4.0	
09/06/94	P-3	ND	20.0	ND	-0.05	-0.06	98	2.5	
09/06/94	P-4	ND	20.2	ND	-0.05	0.04	94	1.6	
09/06/94	P-5	ND	20.2	ND	-0.05	-0.03	102	1.0	
09/06/94	P-6	ND	20.1	ND	-0.05	ND	98	ND	
09/06/94	P-7	ND	17.6	0.6	-0.05	ND	101	ND	
09/06/94	P-8	ND	18.3	1.2	-0.05	0.01	98	0.8	
09/06/94	P-9	ND	13.8	2.0	-0.05	-0.03	99	1.0	
09/06/94	P-10	ND	19.5	0.1	-0.05	0.01	102	0.8	
09/06/94	P-11	ND	17.3	0.7	-0.05	ND	97	ND	
09/06/94	P-12	ND	20.4	ND	-0.05	0.02	97	0.8	
09/06/94	P-13	ND	20.4	ND	-0.05	ND	100	ND	
09/06/94	P-13A	ND	4.4	4.8	-0.05	ND	96	ND	
09/06/94	P-14	ND	20.0	0.1	-0.05	0.03	102	1.5	
09/06/94	P-15	ND	16.4	1.7	-0.05	0.01	102	ND	
09/06/94	P-16	ND	20.2	0.2	-0.05	0.02	98	0.8	
09/06/94	P-17	ND	17.1	1.7	-0.05	ND	99	ND	
09/06/94	P-18	ND	20.3	ND	-0.02	0.02	98	0.8	
09/06/94	P-19	ND	18.6	1.1	-0.05	ND	102	ND	
09/06/94	P-20	ND	19.7	0.3	-0.05	0.03	103	1.6	
09/06/94	P-21	ND	11.8	2.2	-0.04	-0.01	101	1.6	
09/06/94	P-22	ND	19.5	0.2	-0.04	ND	103	ND	
09/06/94	P-23	ND	19.2	0.2	-0.22	ND	102	ND	
09/06/94	P-24	7.1	8.7	13.5	-0.22	-0.12	114	30.4	
09/06/94	P-25	3.5	13.6	7.7	-0.22	-0.18	112	36.8	
09/06/94	P-26	ND	20.4	0.2	-0.22	ND	94	ND	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Well Head Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
09/06/94	P-27	ND	19.5	0.2	-0.24	0.04	94	1.6	
09/06/94	P-28	2.0	5.3	14.8	-0.22	-0.06	136	13.6	
09/06/94	P-29	ND	20.5	ND	-0.20	ND	94	ND	
09/06/94	P-30	1.9	11.5	9.5	-0.20	-0.11	111	22.4	
09/06/94	P-31	ND	17.0	1.9	-0.20	-0.12	118	24.8	
09/06/94	P-32	ND	19.0	0.3	-0.20	-0.06	102	8.8	
09/06/94	P-33	ND	17.9	1.5	-0.20	0.03	94	0.8	
09/06/94	P-34	ND	17.0	0.6	-0.18	0.02	98	0.8	
09/06/94	P-35	ND	14.7	0.7	-0.18	-0.02	99	1.6	
09/06/94	P-36	0.2	13.5	2.8	-0.18	-0.06	106	3.2	
09/06/94	P-37	ND	20.5	ND	-0.18	0.01	92	0.8	
09/06/94	P-38	ND	11.0	7.0	-0.18	0.06	98	3.2	
09/06/94	P-39	ND	19.8	0.2	-0.18	0.04	97	2.4	
09/06/94	W-1	12.0	1.0	23.8	-1.40	-0.19	104	43.7	
09/06/94	W-2	7.8	1.1	22.1	-1.40	-0.14	103	28.5	
09/06/94	W-3	23.2	2.3	28.2	-1.30	-0.21	112	24.8	
09/06/94	W-4	18.9	1.6	25.7	-1.30	-0.14	96	18.4	
09/06/94	W-5	16.2	1.9	25.3	-1.40	-0.07	101	6.4	
09/06/94	W-6	13.4	5.2	20.2	-1.40	-0.02	100	1.9	
09/06/94	W-7	32.7	0.9	32.7	-1.40	-1.01	99	60.8	
09/06/94	W-8	7.4	0.9	22.3	-1.40	-0.11	101	9.6	
09/06/94	W-9	15.3	0.9	25.6	-1.40	-0.09	99	19.0	
09/06/94	W-10	8.5	1.3	22.0	-1.50	-0.13	94	22.8	
09/06/94	W-11	13.7	0.9	24.9	-1.80	-0.20	101	39.9	
09/06/94	W-12	3.1	3.0	18.9	-1.90	-0.32	94	58.9	ADJUSTED TO -0.08
09/06/94	W-13	16.6	1.4	27.5	-2.00	-0.06	106	7.6	
09/06/94	W-14	7.9	3.0	20.0	-2.20	-0.08	134	5.7	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
09/06/94	W-15	ND	18.6	0.4	-2.30	-0.30	96	7.6	
09/06/94	W-16	15.8	0.9	27.0	-2.40	-0.89	101	138.7	
09/06/94	W-17	4.3	5.6	15.3	-2.40	-0.90	83	134.9	ADJUSTED TO -0.16
09/06/94	W-18	9.5	1.4	22.5	-2.40	-0.90	102	127.3	ADJUSTED TO -0.28
09/06/94	W-20	20.8	0.9	27.9	-1.90	-0.43	94	87.4	
09/06/94	W-21	24.4	1.3	29.6	-1.90	-1.74	102	50.4	
09/06/94	W-23	30.5	0.4	33.2	-31.5	-1.90	87	193.8	
09/06/94	W-24	22.3	4.8	24.5	-30.5	-0.08	85	36.1	
09/06/94	W-25	48.4	1.3	38.5	-30.5	-26.5	102	101.6	
09/06/94	W-26	4.0	9.7	11.9	-30.0	-0.23	98	39.9	ADJUSTED TO -0.08
09/06/94	W-27	44.7	1.0	36.4	-31.5	-11.5	103	511.1	ADJUSTED TO -12.2
09/06/94	W-28A	31.3	0.7	32.7	-30.5	-1.61	129	69.6	
09/06/94	W-28B	23.1	2.0	28.5	-30.5	-0.59	122	100.7	
09/06/94	W-29	38.5	1.7	29.8	-23.0	-0.82	83	119.7	
09/06/94	W-29A	18.2	0.5	22.5	-22.5	-0.04	86	7.6	
09/06/94	W-30	19.8	1.3	25.5	-30.0	-36.0	72	46.4	
09/06/94	W-31	56.0	0.4	19.1	-30.0	-26.4	96	73.6	
09/06/94	W-32	26.7	0.6	30.2	-30.0	-0.20	92	48.8	
09/06/94	W-33	22.4	4.9	24.3	-30.5	-13.0	91	212.8	ADJUSTED TO -9.50
09/06/94	W-36	40.7	1.6	34.9	-30.0	-15.5	109	207.1	
09/06/94	W-37	28.7	2.9	29.6	-30.0	-8.00	98	176.7	
09/06/94	W-37A	12.5	1.6	23.4	-17.0	-0.10	109	15.2	
09/06/94	W-38	ND	19.0	0.1	-30.0	0.06	86	ND	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1



## SCS FIELD SERVICES

November 22, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of October 1 through 31, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 7, 7A, 9, 13A, 13D, 15A, 29B, 29C, 35, 37, 38, 38B, 43, and 45 were plugged, lost, and/or damaged (i.e., buried by work conducted by others) during portions of all of the reporting period.
- Test results beneath on-site structures and storage containers indicated no methane gas was detected.
- Extraction Well Nos. W-22 and W-37B were inaccessible and therefore could not be tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38.
- Surface cracks were observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).

Mr. George Cosby  
November 22, 1994  
Page Two

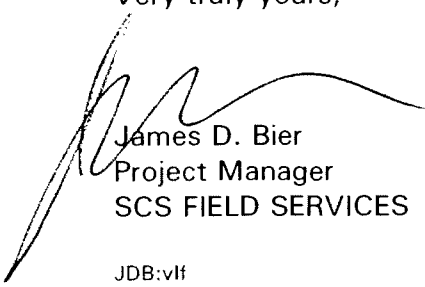
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33, Monitoring Well Nos. 1 through 8A and 24 through 30.
- South Coast Air Quality Management District (SCAQMD) conducted a site inspection to investigate an odor complaint in the vicinity of the LA Auto Salvage Yard. SCS-FS was not present during this inspection but understands no violations were issued.

At the request of Calmat, SCS-FS tested subsurface soil conditions (via barpunch) in the vicinity of Monitoring Well No. 6C. No methane gas was detected.

- The quarterly site observation was performed with only minor repairs being conducted.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

November 22, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of October 1 through 31, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.

Mr. George Cosby  
November 22, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

All monitoring wells tested exhibited no methane gas detected throughout the reporting period. Test locations are shown on Figure No. 1 (attached).

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 7, 7A, 9, 13A, 13D, 15A, 29B, 29C, 35, 37, 38, 38B, 43, and 45 could not be located or were plugged during all or portions of the reporting period due to being buried and/or damaged by work performed by others. **SCS-FS recommends these monitoring wells be repaired and/or located as soon as possible.**

At the request of Calmat, SCS-FS tested subsurface conditions (via barpunch) in the vicinity of Monitoring Well No. 6C. No methane gas was detected.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Test results beneath these structures indicated no methane gas was detected.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 72 to 136 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

As shown in Table 1, Extraction Well Nos. W-22 and W-37B were inaccessible and therefore could not be tested. **SCS-FS recommends access be restored as soon as possible.**

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

Mr. George Cosby  
November 22, 1994  
Page Four

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1571 degrees Fahrenheit. All other operating parameters remained within the prescribed limits.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of

Mr. George Cosby  
November 22, 1994  
Page Five

settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Vegetation overgrowth has been observed in the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. During the reporting period, SCS-FS observed landscaping work being performed by others. **SCS-FS recommends the remaining vegetation overgrowth be removed.**

In October 1994, SCAQMD conducted a site inspection to investigate an odor complaint in the vicinity of the LA Auto Salvage Yard. SCS-FS was not present during this inspection but understands no violations were issued. SCS-FS conducted follow-up observation/testing with no odor or methane being detected.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. On October 18, 1994, these quarterly activities were completed and are discussed below. (The next quarterly site observation is scheduled to be conducted in January 1995).

During the quarterly activities, SCS-FS completed minor repairs to key LFG collection system components as required. In addition, ITC flexhoses were replaced at two perimeter extraction wells.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Mr. George Cosby  
November 22, 1994  
Page Six

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/11/94	P-1	ND	16.9	0.9	-0.04	-0.07	76	5.5	
10/11/94	P-2	ND	18.1	1.1	-0.04	ND	85	ND	
10/11/94	P-3	ND	20.0	ND	-0.04	-0.17	83	6.0	
10/11/94	P-4	ND	20.0	ND	-0.04	0.01	88	0.8	
10/11/94	P-5	ND	20.0	ND	-0.04	ND	93	ND	
10/11/94	P-6	ND	19.9	ND	-0.04	ND	89	ND	
10/11/94	P-7	ND	17.8	1.0	-0.04	ND	91	ND	
10/11/94	P-8	ND	17.3	1.1	-0.04	ND	93	ND	
10/11/94	P-9	ND	17.9	0.7	-0.04	-0.03	96	1.5	
10/11/94	P-10	ND	18.8	0.5	-0.04	0.01	89	0.8	
10/11/94	P-11	ND	20.0	ND	-0.04	0.01	86	0.8	
10/11/94	P-12	ND	18.8	0.5	-0.04	ND	90	ND	
10/11/94	P-13	ND	20.1	ND	-0.04	ND	93	ND	
10/11/94	P-13A	ND	5.8	6.0	-0.04	ND	82	ND	
10/11/94	P-14	ND	19.8	ND	-0.04	0.02	96	0.5	
10/11/94	P-15	ND	20.3	ND	-0.04	ND	94	ND	
10/11/94	P-16	ND	20.3	ND	-0.04	ND	96	ND	
10/11/94	P-17	ND	20.2	ND	-0.04	-0.02	96	1.0	
10/11/94	P-18	ND	19.9	ND	-0.04	ND	97	ND	
10/11/94	P-19	ND	20.3	ND	-0.04	ND	96	ND	
10/11/94	P-20	ND	19.7	0.2	-0.04	ND	94	ND	
10/11/94	P-21	ND	16.5	1.0	-0.04	-0.01	94	0.8	
10/11/94	P-22	ND	19.6	0.2	-0.04	0.02	92	0.8	
10/11/94	P-23	ND	16.7	1.1	-0.16	ND	102	ND	
10/11/94	P-24	8.3	7.2	15.0	-0.16	-0.08	106	17.6	
10/11/94	P-25	5.3	10.9	11.0	-0.16	-0.12	110	27.2	
10/11/94	P-26	ND	19.0	0.5	-0.16	ND	96	ND	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/11/94	P-27	ND	18.9	0.3	-0.18	ND	90	ND	
10/11/94	P-28	6.5	1.3	21.0	-0.14	-0.05	132	15.2	
10/11/94	P-29	ND	20.3	ND	-0.14	ND	86	ND	
10/11/94	P-30	4.0	8.4	13.0	-0.14	-0.07	111	12.8	
10/11/94	P-31	ND	15.0	2.4	-0.14	-0.08	96	18.4	
10/11/94	P-32	ND	18.8	0.6	-0.14	-0.04	83	7.2	
10/11/94	P-33	ND	16.7	1.1	-0.14	ND	83	ND	
10/11/94	P-34	ND	15.8	1.8	-0.12	ND	86	ND	
10/11/94	P-35	0.6	13.1	5.0	-0.12	-0.03	97	4.0	
10/11/94	P-36	4.0	8.6	11.0	-0.12	-0.06	108	12.8	
10/11/94	P-37	ND	19.7	0.2	-0.12	ND	87	ND	
10/11/94	P-38	ND	3.0	15.3	-0.12	0.06	89	2.4	
10/11/94	P-39	ND	17.1	2.3	-0.12	0.06	89	1.6	
10/11/94	W-1	12.6	0.5	24.0	-1.30	-0.18	86	55.1	
10/11/94	W-2	8.0	0.4	23.0	-1.30	-0.13	88	26.6	
10/11/94	W-3	25.4	0.3	31.0	-1.30	-0.34	85	38.4	
10/11/94	W-4	20.0	0.7	27.0	-1.30	-0.17	84	16.8	
10/11/94	W-5	20.3	0.8	27.0	-1.20	-0.10	97	15.2	
10/11/94	W-6	13.0	5.6	20.0	-1.30	-0.03	91	7.6	
10/11/94	W-7	34.0	0.2	32.0	-1.30	-0.94	87	28.8	
10/11/94	W-8	7.7	0.4	23.0	-1.30	-0.10	90	11.2	
10/11/94	W-9	16.3	0.2	25.0	-1.30	-0.10	84	20.9	
10/11/94	W-10	11.7	0.6	24.0	-1.30	-0.11	86	26.6	
10/11/94	W-11	15.3	0.3	25.0	-1.40	-0.20	89	45.6	
10/11/94	W-12	10.1	0.9	23.0	-1.40	-0.10	76	34.2	
10/11/94	W-13	17.8	1.3	26.0	-1.50	-0.02	93	7.6	
10/11/94	W-14	9.3	2.1	21.0	-1.50	-0.12	136	15.2	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Well Head Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/11/94	W-15	ND	19.2	0.4	-1.60	-0.26	82	30.4	
10/11/94	W-16	15.5	4.2	22.0	-2.00	-0.71	104	55.1	
10/11/94	W-17	18.7	3.3	24.0	-2.00	-0.17	88	20.9	
10/11/94	W-18	15.3	0.2	26.0	-2.00	-0.20	82	26.6	
10/11/94	W-20	26.0	0.1	31.0	-1.80	-0.33	81	24.7	
10/11/94	W-21	27.0	0.9	30.0	-1.80	-1.50	101	18.4	
10/11/94	W-22	NT	NT	NT	NT	NT	NT	NT	UNABLE TO LOCATE
10/11/94	W-23	32.0	ND	34.0	-35.0	-1.90	76	114.0	
10/11/94	W-24	34.4	0.7	32.0	-33.0	-0.06	82	7.6	ADJUSTED TO -0.28
10/11/94	W-25	53.3	0.2	41.9	-33.0	-30.0	94	88.0	
10/11/94	W-26	20.0	1.7	27.0	-33.0	-0.23	76	11.4	
10/11/94	W-27	46.1	0.5	40.2	-35.0	-8.20	94	180.5	ADJUSTED TO -8.90
10/11/94	W-28	24.0	ND	30.0	-33.0	-0.84	81	41.8	
10/11/94	W-28A	30.9	2.0	31.0	-33.0	-1.90	131	60.0	
10/11/94	W-28B	25.0	1.7	28.0	-33.0	-0.61	123	26.6	
10/11/94	W-29	37.1	1.8	31.0	-15.0	-0.80	118	128.3	
10/11/94	W-29A	18.3	0.2	23.0	-15.0	-0.06	86	3.8	
10/11/94	W-30	41.0	0.6	35.0	-33.0	-32.0	75	26.4	
10/11/94	W-31	53.8	ND	40.0	-33.0	-29.0	96	71.2	
10/11/94	W-32	33.4	ND	32.0	-33.0	-0.18	72	17.6	
10/11/94	W-33	27.1	3.7	27.0	-33.0	-12.0	76	66.5	
10/11/94	W-36	45.9	0.7	37.0	-33.0	-18.0	85	161.5	ADJUSTED TO -21.0
10/11/94	W-37	30.0	3.1	28.0	-33.0	-9.00	107	104.5	
10/11/94	W-37A	12.7	1.0	23.0	-8.00	-0.08	107	15.2	
10/11/94	W-37B	NT	NT	NT	NT	NT	NT	NT	INACCESSIBLE
10/11/94	W-38	ND	19.6	ND	-33.0	-0.01	83	3.8	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

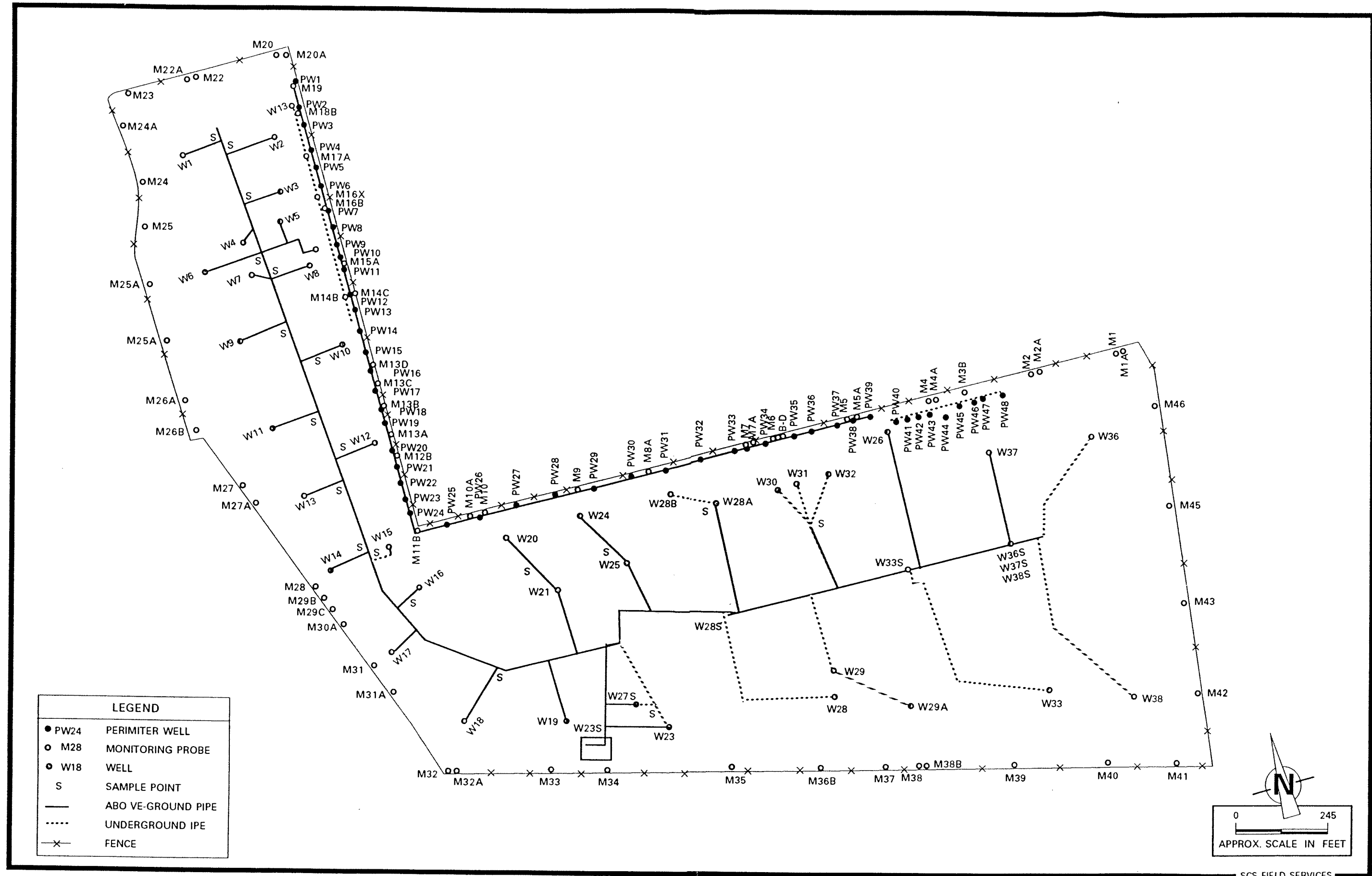


Figure 1. Hewitt North Hollywood/Probes and Well Field.



**SCS FIELD SERVICES**

November 22, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of October 1 through 31, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected in any of the LFG migration control monitoring wells tested.
- Monitoring Well Nos. 7, 7A, 9, 13A, 13D, 15A, 29B, 29C, 35, 37, 38, 38B, 43, and 45 were plugged, lost, and/or damaged (i.e., buried by work conducted by others) during portions of all of the reporting period.
- Test results beneath on-site structures and storage containers indicated no methane gas was detected.
- Extraction Well Nos. W-22 and W-37B were inaccessible and therefore could not be tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38.
- Surface cracks were observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).

Mr. George Cosby  
November 22, 1994  
Page Two

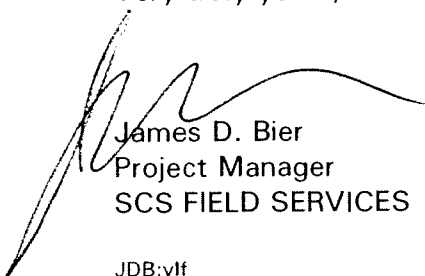
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33, Monitoring Well Nos. 1 through 8A and 24 through 30.
- South Coast Air Quality Management District (SCAQMD) conducted a site inspection to investigate an odor complaint in the vicinity of the LA Auto Salvage Yard. SCS-FS was not present during this inspection but understands no violations were issued.

At the request of Calmat, SCS-FS tested subsurface soil conditions (via barpunch) in the vicinity of Monitoring Well No. 6C. No methane gas was detected.

- The quarterly site observation was performed with only minor repairs being conducted.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

November 22, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of October 1 through 31, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.

Mr. George Cosby  
November 22, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

All monitoring wells tested exhibited no methane gas detected throughout the reporting period. Test locations are shown on Figure No. 1 (attached).

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 7, 7A, 9, 13A, 13D, 15A, 29B, 29C, 35, 37, 38, 38B, 43, and 45 could not be located or were plugged during all or portions of the reporting period due to being buried and/or damaged by work performed by others. **SCS-FS recommends these monitoring wells be repaired and/or located as soon as possible.**

At the request of Calmat, SCS-FS tested subsurface conditions (via barpunch) in the vicinity of Monitoring Well No. 6C. No methane gas was detected.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Mr. George Cosby  
November 22, 1994  
Page Three

Test results beneath these structures indicated no methane gas was detected.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 72 to 136 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

As shown in Table 1, Extraction Well Nos. W-22 and W-37B were inaccessible and therefore could not be tested. **SCS-FS recommends access be restored as soon as possible.**

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1571 degrees Fahrenheit. All other operating parameters remained within the prescribed limits.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of

Mr. George Cosby  
November 22, 1994  
Page Five

settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Vegetation overgrowth has been observed in the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. During the reporting period, SCS-FS observed landscaping work being performed by others. **SCS-FS recommends the remaining vegetation overgrowth be removed.**

In October 1994, SCAQMD conducted a site inspection to investigate an odor complaint in the vicinity of the LA Auto Salvage Yard. SCS-FS was not present during this inspection but understands no violations were issued. SCS-FS conducted follow-up observation/testing with no odor or methane being detected.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. On October 18, 1994, these quarterly activities were completed and are discussed below. (The next quarterly site observation is scheduled to be conducted in January 1995).

During the quarterly activities, SCS-FS completed minor repairs to key LFG collection system components as required. In addition, ITC flexhoses were replaced at two perimeter extraction wells.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Mr. George Cosby  
November 22, 1994  
Page Six

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Well Head Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/11/94	P-1	ND	16.9	0.9	-0.04	-0.07	76	5.5	
10/11/94	P-2	ND	18.1	1.1	-0.04	ND	85	ND	
10/11/94	P-3	ND	20.0	ND	-0.04	-0.17	83	6.0	
10/11/94	P-4	ND	20.0	ND	-0.04	0.01	88	0.8	
10/11/94	P-5	ND	20.0	ND	-0.04	ND	93	ND	
10/11/94	P-6	ND	19.9	ND	-0.04	ND	89	ND	
10/11/94	P-7	ND	17.8	1.0	-0.04	ND	91	ND	
10/11/94	P-8	ND	17.3	1.1	-0.04	ND	93	ND	
10/11/94	P-9	ND	17.9	0.7	-0.04	-0.03	96	1.5	
10/11/94	P-10	ND	18.8	0.5	-0.04	0.01	89	0.8	
10/11/94	P-11	ND	20.0	ND	-0.04	0.01	86	0.8	
10/11/94	P-12	ND	18.8	0.5	-0.04	ND	90	ND	
10/11/94	P-13	ND	20.1	ND	-0.04	ND	93	ND	
10/11/94	P-13A	ND	5.8	6.0	-0.04	ND	82	ND	
10/11/94	P-14	ND	19.8	ND	-0.04	0.02	96	0.5	
10/11/94	P-15	ND	20.3	ND	-0.04	ND	94	ND	
10/11/94	P-16	ND	20.3	ND	-0.04	ND	96	ND	
10/11/94	P-17	ND	20.2	ND	-0.04	-0.02	96	1.0	
10/11/94	P-18	ND	19.9	ND	-0.04	ND	97	ND	
10/11/94	P-19	ND	20.3	ND	-0.04	ND	96	ND	
10/11/94	P-20	ND	19.7	0.2	-0.04	ND	94	ND	
10/11/94	P-21	ND	16.5	1.0	-0.04	-0.01	94	0.8	
10/11/94	P-22	ND	19.6	0.2	-0.04	0.02	92	0.8	
10/11/94	P-23	ND	16.7	1.1	-0.16	ND	102	ND	
10/11/94	P-24	8.3	7.2	15.0	-0.16	-0.08	106	17.6	
10/11/94	P-25	5.3	10.9	11.0	-0.16	-0.12	110	27.2	
10/11/94	P-26	ND	19.0	0.5	-0.16	ND	96	ND	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/11/94	P-27	ND	18.9	0.3	-0.18	ND	90	ND	
10/11/94	P-28	6.5	1.3	21.0	-0.14	-0.05	132	15.2	
10/11/94	P-29	ND	20.3	ND	-0.14	ND	86	ND	
10/11/94	P-30	4.0	8.4	13.0	-0.14	-0.07	111	12.8	
10/11/94	P-31	ND	15.0	2.4	-0.14	-0.08	96	18.4	
10/11/94	P-32	ND	18.8	0.6	-0.14	-0.04	83	7.2	
10/11/94	P-33	ND	16.7	1.1	-0.14	ND	83	ND	
10/11/94	P-34	ND	15.8	1.8	-0.12	ND	86	ND	
10/11/94	P-35	0.6	13.1	5.0	-0.12	-0.03	97	4.0	
10/11/94	P-36	4.0	8.6	11.0	-0.12	-0.06	108	12.8	
10/11/94	P-37	ND	19.7	0.2	-0.12	ND	87	ND	
10/11/94	P-38	ND	3.0	15.3	-0.12	0.06	89	2.4	
10/11/94	P-39	ND	17.1	2.3	-0.12	0.06	89	1.6	
10/11/94	W-1	12.6	0.5	24.0	-1.30	-0.18	86	55.1	
10/11/94	W-2	8.0	0.4	23.0	-1.30	-0.13	88	26.6	
10/11/94	W-3	25.4	0.3	31.0	-1.30	-0.34	85	38.4	
10/11/94	W-4	20.0	0.7	27.0	-1.30	-0.17	84	16.8	
10/11/94	W-5	20.3	0.8	27.0	-1.20	-0.10	97	15.2	
10/11/94	W-6	13.0	5.6	20.0	-1.30	-0.03	91	7.6	
10/11/94	W-7	34.0	0.2	32.0	-1.30	-0.94	87	28.8	
10/11/94	W-8	7.7	0.4	23.0	-1.30	-0.10	90	11.2	
10/11/94	W-9	16.3	0.2	25.0	-1.30	-0.10	84	20.9	
10/11/94	W-10	11.7	0.6	24.0	-1.30	-0.11	86	26.6	
10/11/94	W-11	15.3	0.3	25.0	-1.40	-0.20	89	45.6	
10/11/94	W-12	10.1	0.9	23.0	-1.40	-0.10	76	34.2	
10/11/94	W-13	17.8	1.3	26.0	-1.50	-0.02	93	7.6	
10/11/94	W-14	9.3	2.1	21.0	-1.50	-0.12	136	15.2	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Well Head Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
10/11/94	W-15	ND	19.2	0.4	-1.60	-0.26	82	30.4	
10/11/94	W-16	15.5	4.2	22.0	-2.00	-0.71	104	55.1	
10/11/94	W-17	18.7	3.3	24.0	-2.00	-0.17	88	20.9	
10/11/94	W-18	15.3	0.2	26.0	-2.00	-0.20	82	26.6	
10/11/94	W-20	26.0	0.1	31.0	-1.80	-0.33	81	24.7	
10/11/94	W-21	27.0	0.9	30.0	-1.80	-1.50	101	18.4	
10/11/94	W-22	NT	NT	NT	NT	NT	NT	NT	UNABLE TO LOCATE
10/11/94	W-23	32.0	ND	34.0	-35.0	-1.90	76	114.0	
10/11/94	W-24	34.4	0.7	32.0	-33.0	-0.06	82	7.6	ADJUSTED TO -0.28
10/11/94	W-25	53.3	0.2	41.9	-33.0	-30.0	94	88.0	
10/11/94	W-26	20.0	1.7	27.0	-33.0	-0.23	76	11.4	
10/11/94	W-27	46.1	0.5	40.2	-35.0	-8.20	94	180.5	ADJUSTED TO -8.90
10/11/94	W-28	24.0	ND	30.0	-33.0	-0.84	81	41.8	
10/11/94	W-28A	30.9	2.0	31.0	-33.0	-1.90	131	60.0	
10/11/94	W-28B	25.0	1.7	28.0	-33.0	-0.61	123	26.6	
10/11/94	W-29	37.1	1.8	31.0	-15.0	-0.80	118	128.3	
10/11/94	W-29A	18.3	0.2	23.0	-15.0	-0.06	86	3.8	
10/11/94	W-30	41.0	0.6	35.0	-33.0	-32.0	75	26.4	
10/11/94	W-31	53.8	ND	40.0	-33.0	-29.0	96	71.2	
10/11/94	W-32	33.4	ND	32.0	-33.0	-0.18	72	17.6	
10/11/94	W-33	27.1	3.7	27.0	-33.0	-12.0	76	66.5	
10/11/94	W-36	45.9	0.7	37.0	-33.0	-18.0	85	161.5	ADJUSTED TO -21.0
10/11/94	W-37	30.0	3.1	28.0	-33.0	-9.00	107	104.5	
10/11/94	W-37A	12.7	1.0	23.0	-8.00	-0.08	107	15.2	
10/11/94	W-37B	NT	NT	NT	NT	NT	NT	NT	INACCESSIBLE
10/11/94	W-38	ND	19.6	ND	-33.0	-0.01	83	3.8	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1



**SCS FIELD SERVICES**

December 29, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of November 1 through 30, 1994. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.


- With the exception of Monitoring Well Nos. 5A (6.1 percent by volume on November 29, 1994) and 42 (0.3 and 0.6 percent by volume on November 15 and 29, 1994, respectively), no methane gas was detected in any of the LFG migration control monitoring wells tested. (It should be noted, the report submitted by Mr. Glen Donaldson erroneously reported no methane gas detected at all monitoring wells). System adjustments were implemented to decrease the methane gas detected.
- Monitoring Well Nos. 9, 13A, 29B, 29C, 35, 37, 38, 38B, and 43 were plugged, lost, and/or damaged (i.e., buried by work conducted by others) during portions or all of the reporting period.
- Several monitoring wells (7, 7A, 13D, 15A, and 45) previously reported as missing were located.
- Test results beneath on-site structures and storage containers indicated no methane gas was detected.
- Extraction Well Nos. W-22 and W-37B were inaccessible and therefore could not be tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- Several extraction well flow control valves continue to be reported as being inoperable or difficult to adjust and need to be replaced and/or repaired.

Mr. George Cosby  
December 29, 1994  
Page Two

- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38.
- Surface cracks were observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39).
- The original LFG flow and temperature recorders located at the BFS were previously reported as being inoperable and in need of repair. However, in the absence of these repairs, the annunciator panel instrumentation continues to record these two operating parameters.
- The LFG condensate knock-out tank located at the BFS was previously observed to be leaking. Temporary repairs continue to be successful in sealing this leak.
- Two LFG condensate traps are operating with temporary repairs completed during previous quarterly site observations.
- Vegetation needs to be removed from the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33, Monitoring Well Nos. 1 through 8A and 24 through 30.
- The annual flare maintenance was performed.

Should you have any questions, do not hesitate to contact the undersigned.

Very truly yours,



James D. Bier  
Project Manager  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

## SCS FIELD SERVICES

December 29, 1994  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance performed by SCS Field Services (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of November 1 through 30, 1994.

### Conclusion and Recommendations

As of the date of this report, the collection system appears to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion. Methane gas does not become a potential hazard until it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source.

Mr. George Cosby  
December 29, 1994  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system. The first main criteria is that the LFG collection system be operated such that no methane gas is detected at any monitoring well location.

The second main operational criteria is that the flare exit gas temperature be maintained at a minimum of 1400 degrees Fahrenheit. A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: one as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

With the exception of Monitoring Well Nos. 5A (6.1 percent by volume on November 29, 1994) and 42 (0.3 and 0.6 percent by volume on November 15 and 29, 1994, respectively), all monitoring wells tested exhibited no methane gas detected throughout the reporting period. Following system adjustments, methane gas concentrations detected at Monitoring Well Nos. 5A and 42 decreased to below the LEL by the date of this report. Test locations are shown on Figure No. 1 (attached).

Results of the monthly testing of monitoring wells have been forwarded to Cal Mat via a separate report provided by Mr. Glen Donaldson (a copy of the results were left with on-site Cal Mat staff). As noted in Mr. Donaldson's monthly report, Monitoring Well Nos. 9, 13A, 29B, 29C, 35, 37, 38, 38B, and 43 could not be located or were plugged during all or portions of the reporting period due to being buried and/or damaged by work performed by others. **SCS-FS recommends these monitoring wells be repaired and/or located as soon as possible.** Monitoring Well Nos. 7, 7A, 13D, 15A, and 45, previously report as missing, were located and tested this reporting period.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on a weekly basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Mr. George Cosby  
December 29, 1994  
Page Three

Test results beneath these structures indicated no methane gas was detected.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is defined as when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then finally injected into the flare. If an extreme overpull condition is allowed to continue for a long period, a drop in the methane gas content of the collected LFG (thereby reducing the flare exit gas temperature) and/or a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the extraction wells (see Table 1) indicates that a significant number of wells exhibit an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain the perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain the monitoring wells clear of methane gas. It should be noted that some extraction wells exhibit evidence of current or past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 72 to 139 degrees Fahrenheit (see Table 1). Some of these temperatures are high for anaerobic decomposition and indicate that subsurface combustion may currently exist.

As shown in Table 1, Extraction Well Nos. W-22 and W-37B were inaccessible and therefore could not be tested. **SCS-FS recommends access be restored as soon as possible.**

During this and previous reporting periods several extraction well flow control valves were observed to be inoperable or difficult to adjust. In January 1993, some of these valves were replaced. **SCS-FS recommends the work scope contained in our August 23, 1993, proposal be implemented to address the remaining problem control valves.**

#### LFG Blower/Flare Station Testing

Visual observations and testing of LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day.

Mr. George Cosby  
December 29, 1994  
Page Four

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1572 degrees Fahrenheit. All other operating parameters remained within the prescribed limits.

On November 22, 1994, SCS-FS completed the annual flare maintenance activities. Briefly, these activities consisted of replacing the UV tubes for the Honeywell Scanners and thermocouples.

Additionally, the original temperature and flow recorders were observed to be malfunctioning. However, the annunciator panel flow and temperature recorders continue to operate satisfactorily. Cal Mat may wish to consider repair of these pieces of equipment to serve as a back-up.

Finally, the condensate knock-out tank was previously observed to be leaking and is currently operating with temporary repairs. **SCS-FS recommends that permanent repairs be made as soon as possible.**

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-24, W-25, W-28A, W-28B, W-30, W-31, W-32, W-33, W-36, W-37, and W-38. **SCS-FS recommends the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

Mr. George Cosby  
December 29, 1994  
Page Five

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of settlement have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

Numerous small cracks were previously observed along the site perimeter (especially between Self Storage Container Nos. F10 through F18, MW-3B through MW-7, and Perimeter Extraction Well Nos. P-5 through P-39). **SCS-FS recommends the above noted surface cracks be sealed.**

Vegetation overgrowth has been observed in the vicinity of the dog leg, Extraction Well Nos. W-15 through W-18, W-24, W-25, W-28, W-28A, W-28B, W-30 through W-33 and Monitoring Well Nos. 1 through 8A and 24 through 30. During the reporting period, SCS-FS observed landscaping work being performed by others. **SCS-FS recommends the remaining vegetation overgrowth be removed.**

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. During these observations, minor repairs (e.g., regluing of fittings, replacement of worn flexhoses, etc.) of noted deficiencies were completed as needed. The next quarterly site observation is scheduled to be conducted in January 1995.

During a previous quarterly visit, it was discovered that two LFG condensate traps were damaged (i.e., PVC pipe had cracked) and were allowing air to be drawn into the LFG collection system. Temporary repairs have been completed to minimize air infiltration. **SCS-FS recommends permanent repairs be completed as soon as possible.**

#### Standard Provisions

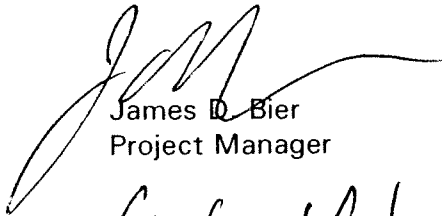
This report address condition observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at sometime during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Mr. George Cosby  
December 29, 1994  
Page Six

Should you have any questions, please do not hesitate to contact either of the under signed.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J. M. Bier", with a long horizontal flourish extending to the right.

James D. Bier  
Project Manager

A handwritten signature in cursive script, appearing to read "Galen S. Petoyan", with a long horizontal flourish extending to the right.

Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
Rep\0789003

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
11/01/94	P-1	ND	17.9	1.0	-0.02	0.17	83	1.0	
11/01/94	P-2	ND	16.7	1.2	-0.02	0.05	84	1.6	
11/01/94	P-3	1.1	3.6	7.2	-0.02	0.22	82	2.0	ADJUSTED TO -0.02
11/01/94	P-4	ND	17.6	1.6	-0.02	0.08	81	4.8	
11/01/94	P-5	ND	15.4	0.7	-0.02	0.12	84	2.0	
11/01/94	P-6	ND	17.3	1.0	-0.02	0.12	82	2.0	
11/01/94	P-7	ND	15.5	2.1	-0.02	0.08	85	2.0	
11/01/94	P-8	ND	15.7	3.1	-0.02	0.06	87	1.6	
11/01/94	P-9	ND	15.4	0.9	-0.02	0.22	85	3.0	
11/01/94	P-10	ND	16.0	1.1	-0.02	0.08	84	1.6	
11/01/94	P-11	ND	1.7	16.2	-0.02	0.11	85	2.4	
11/01/94	P-12	ND	15.9	1.5	-0.02	0.11	86	3.2	
11/01/94	P-13	ND	13.9	1.0	-0.02	0.19	85	4.8	
11/01/94	P-13A	ND	17.1	1.5	-0.02	0.06	81	1.0	
11/01/94	P-14	ND	16.6	1.7	-0.02	0.06	86	0.5	
11/01/94	P-15	ND	14.2	1.4	-0.02	0.11	83	3.2	
11/01/94	P-16	ND	20.4	ND	-0.02	0.03	87	ND	
11/01/94	P-17	ND	6.0	2.6	-0.02	0.20	88	3.0	
11/01/94	P-18	ND	19.6	0.5	-0.02	0.05	89	0.8	
11/01/94	P-19	ND	10.3	1.1	-0.02	0.21	86	4.8	
11/01/94	P-20	ND	18.1	0.8	-0.02	0.08	84	3.2	
11/01/94	P-21	ND	13.9	2.4	-0.02	0.06	86	1.6	
11/01/94	P-22	ND	16.7	0.9	-0.02	0.10	84	3.2	
11/01/94	P-23	ND	15.3	1.0	-0.06	0.10	82	3.2	
11/01/94	P-24	8.7	6.6	15.0	-0.06	-0.04	109	3.2	
11/01/94	P-25	7.2	10.0	14.3	-0.06	-0.04	111	4.8	
11/01/94	P-26	ND	18.0	1.1	-0.08	-0.02	119	1.6	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
11/01/94	P-27	ND	19.4	0.7	-0.08	0.11	83	0.8	
11/01/94	P-28	10.2	1.9	19.5	-0.06	-0.02	132	1.6	
11/01/94	P-29	ND	20.8	ND	-0.06	0.01	94	0.8	
11/01/94	P-30	3.1	7.5	6.4	-0.06	ND	111	ND	
11/01/94	P-31	ND	14.9	0.7	-0.06	ND	86	ND	
11/01/94	P-32	ND	19.2	0.5	-0.04	0.01	92	ND	
11/01/94	P-33	ND	17.8	0.8	-0.04	0.09	81	1.6	
11/01/94	P-34	ND	17.9	0.7	-0.04	0.07	80	0.8	
11/01/94	P-35	ND	18.6	1.5	-0.04	0.04	94	3.2	
11/01/94	P-36	0.1	15.9	1.9	-0.04	0.01	98	0.8	
11/01/94	P-37	ND	18.8	0.6	-0.04	0.02	77	0.8	
11/01/94	P-38	ND	2.4	1.9	-0.04	0.16	84	4.8	
11/01/94	P-39	ND	14.6	1.6	-0.04	0.14	82	1.6	
11/01/94	W-1	14.7	0.5	26.5	-1.00	-0.04	86	11.4	
11/01/94	W-2	11.5	0.4	26.2	-1.00	-0.02	83	3.8	
11/01/94	W-3	28.2	0.3	33.0	-0.95	-0.17	82	13.6	
11/01/94	W-4	22.5	0.3	28.5	-0.95	-0.08	87	9.6	
11/01/94	W-5	22.6	0.6	28.6	-0.95	-0.05	87	7.2	
11/01/94	W-6	20.9	0.6	28.4	-0.95	-0.02	87	7.6	
11/01/94	W-7	34.0	1.4	33.0	-1.00	-0.77	90	25.6	
11/01/94	W-8	9.1	0.3	24.8	-1.00	-0.04	82	3.2	
11/01/94	W-9	18.5	0.2	27.4	-1.10	-0.04	84	11.4	
11/01/94	W-10	13.6	0.9	24.9	-1.10	-0.02	85	3.8	
11/01/94	W-11	16.8	0.2	26.7	-1.10	-0.11	85	20.9	
11/01/94	W-12	9.7	0.4	22.6	-1.20	-0.11	77	32.3	
11/01/94	W-13	16.6	1.6	25.8	-1.20	-0.04	90	7.6	
11/01/94	W-14	11.2	1.9	23.1	-1.40	-0.02	139	7.6	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 1  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
11/01/94	W-15	0.8	19.3	1.4	-1.40	-0.27	73	74.1	
11/01/94	W-16	22.0	0.2	30.0	-1.50	-0.51	95	81.7	
11/01/94	W-17	25.5	2.1	29.0	-1.50	-0.11	78	36.1	
11/01/94	W-18	19.0	0.3	28.8	-1.50	-0.07	80	24.7	
11/01/94	W-20	22.4	5.1	25.4	-1.30	-0.10	78	28.5	
11/01/94	W-21	30.0	1.0	32.9	-1.30	-1.10	97	14.0	
11/01/94	W-22	NT	NT	NT	NT	NT	NT	NT	UNABLE TO LOCATE
11/01/94	W-23	31.9	ND	34.7	-36.0	-1.70	76	161.5	
11/01/94	W-24	27.3	1.2	30.5	-34.0	0.06	72	14.3	ADJUSTED TO -0.12
11/01/94	W-25	53.7	0.2	44.5	-34.0	-30.0	83	70.0	
11/01/94	W-26	25.6	0.2	32.3	-34.0	0.16	68	30.4	
11/01/94	W-27	47.2	0.5	41.1	-36.0	-9.50	100	513.0	ADJUSTED TO -10.6
11/01/94	W-28	23.7	0.1	30.3	-34.0	-0.70	74	127.3	
11/01/94	W-28A	32.8	0.7	35.1	-34.0	-1.75	122	5.4	
11/01/94	W-28B	26.5	1.6	30.6	-34.0	-0.51	119	55.1	
11/01/94	W-29	37.9	1.6	32.4	-34.0	-0.75	72	165.3	
11/01/94	W-30	26.9	1.0	31.1	-34.0	-10.5	67	19.2	ADJUSTED TO -3.00
11/01/94	W-31	52.2	0.2	41.6	-34.0	-30.0	94	54.4	
11/01/94	W-32	34.6	0.1	35.2	-34.0	-0.08	74	15.2	ADJUSTED TO -0.28
11/01/94	W-33	30.3	1.8	31.8	-34.0	-6.00	74	72.2	
11/01/94	W-36	45.1	0.7	38.3	-34.0	-24.0	104	185.3	
11/01/94	W-37	30.5	2.5	31.9	-34.0	-9.00	90	123.5	
11/01/94	W-37A	12.0	ND	26.6	-9.50	-0.18	109	16.8	
11/01/94	W-37B	NT	NT	NT	NT	NT	NT	NT	INACCESSIBLE; BURIED UNDER ASPHALT
11/01/94	W-38	ND	20.1	0.4	-34.0	0.08	81	3.8	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 07 FEB 94  
WEEKLY MONITORING PERIOD ..... 28 DEC 93 TO 25 JAN 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	84
NO. OF PROBES WITH NO METHANE .....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	1
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	3
NO. OF PROBES NOT REPORTED .....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

# 5A, 1.3 VOL % METHANE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 38, DESTROYED  
# 38B, DESTROYED  
# 39, PLUGGED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 1-25-94

### 1. FLARE STATION DATA

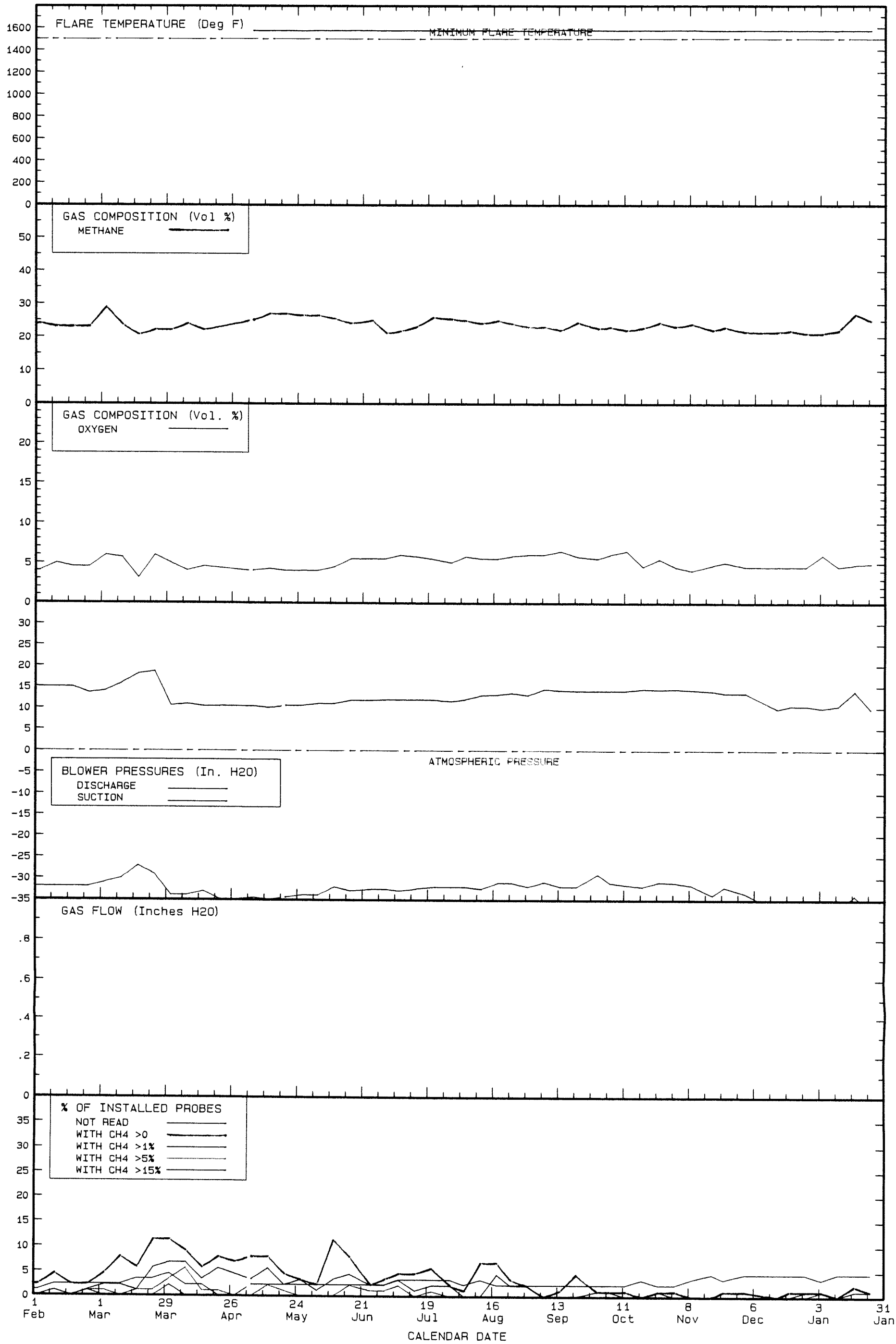
MONITORING DATE	12-28	1-4	1-11	1-18	1-25
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1575	1575	1575	1575	1578
METHANE (Vol %)	21	21	22	27	25
OXYGEN (Vol %)	4.5	6.0	4.5	4.8	5.0
VACUUM (In. H2O)	-37	-35.8	-37.5	-34	-37.5
BACK PRESS. (In. H2O)	10.5	9.9	10.5	14.0	9.7
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	12-28	1-4	1-11	1-18	1-25
PROBE	VOLUME % METHANE				
SELF STORAGE	3	5.3	0	5	0
5A	0	0	0	0.5	1.3
38	DST	DST	DST	DST	DST
388	DST	DST	DST	DST	DST
39	PLG	0	PLG	PLG	PLG
43	LST	LST	LST	LST	LST

DST = DESTROYED; PLG = PLUGGED; LST = LOST

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JANUARY 31, 1994



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 01 MAR 94  
WEEKLY MONITORING PERIOD ..... 25 JAN 94 TO 22 FEB 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	83
NO. OF PROBES WITH NO METHANE .....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	1
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	3
NO. OF PROBES NOT REPORTED .....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

# SELF STORAGE, .9 VOL % METHANE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 9, LOST  
# 37, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 2-22-94

### 1. FLARE STATION DATA

MONITORING DATE	1-25	2-1	2-8	2-15	2-22
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1578	1575	1575	1575	1574
METHANE (Vol %)	25	23	25	21.7	23
OXYGEN (Vol %)	5.0	5.0	6.5	7.0	5.5
VACUUM (In. H2O)	-37.5	-38	-37	-38.5	-37.5
BACK PRESS. (In. H2O)	9.7	10.0	8.2	9.1	8.9
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	1-25	2-1	2-8	2-15	2-22
PROBE	VOLUME % METHANE				
SELF STORAGE	0	0	0	0	<b>0.9</b>
4A	0	0	0	<b>0.1</b>	0
5	0	0	0	<b>0.1</b>	0
5A	<b>1.3</b>	0	0	0	0
7	0	<b>DST</b>	0	0	0
7A	0	0	<b>LST</b>	<b>LST</b>	0
9	0	<b>DST</b>	<b>LST</b>	<b>LST</b>	<b>LST</b>
34	0	0	<b>0.3</b>	0	0
37	0	0	<b>NRD</b>	<b>DST</b>	<b>DST</b>
38	<b>DST</b>	<b>DST</b>	<b>DST</b>	<b>DST</b>	<b>DST</b>
388	<b>DST</b>	0	<b>DST</b>	<b>DST</b>	<b>DST</b>
39	<b>PLG</b>	<b>PLG</b>	<b>PLG</b>	<b>PLG</b>	0
41	0	0	<b>1.5</b>	0	0
42	0	0	<b>2.5</b>	0	0
43	<b>LST</b>	<b>DST</b>	<b>LST</b>	<b>DST</b>	<b>LST</b>

DST = DESTROYED; LST = LOST; NRD = NOT REPORTED; PLG = PLUGGED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	1-25	2-1	2-8	2-15	2-22
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	<b>0.9</b>
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	<b>0.1</b>	0
5	0	0	0	<b>0.1</b>	0
5A	<b>1.3</b>	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	<b>DST</b>	0	0	0
7A	0	0	<b>LST</b>	<b>LST</b>	0
8A	0	0	0	0	0
9	0	<b>DST</b>	<b>LST</b>	<b>LST</b>	<b>LST</b>
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13B	0	0	0	0	0
13C	0	0	0	0	0
13D	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0

DST = DESTROYED; LST = LOST

# EXHIBIT A (Continued)

MONITORING DATE	1-25	2-1	2-8	2-15	2-22
PROBE	VOLUME % METHANE				
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
26B	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0.3	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	NRD	DST	DST
38	DST	DST	DST	DST	DST
38B	DST	0	DST	DST	DST
39	PLG	PLG	PLG	PLG	0
40	0	0	0	0	0
41	0	0	1.5	0	0
42	0	0	2.5	0	0
43	LST	DST	LST	DST	LST
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0

NRD = NOT REPORTED; DST = DESTROYED; PLG = PLUGGED; LST = LOST

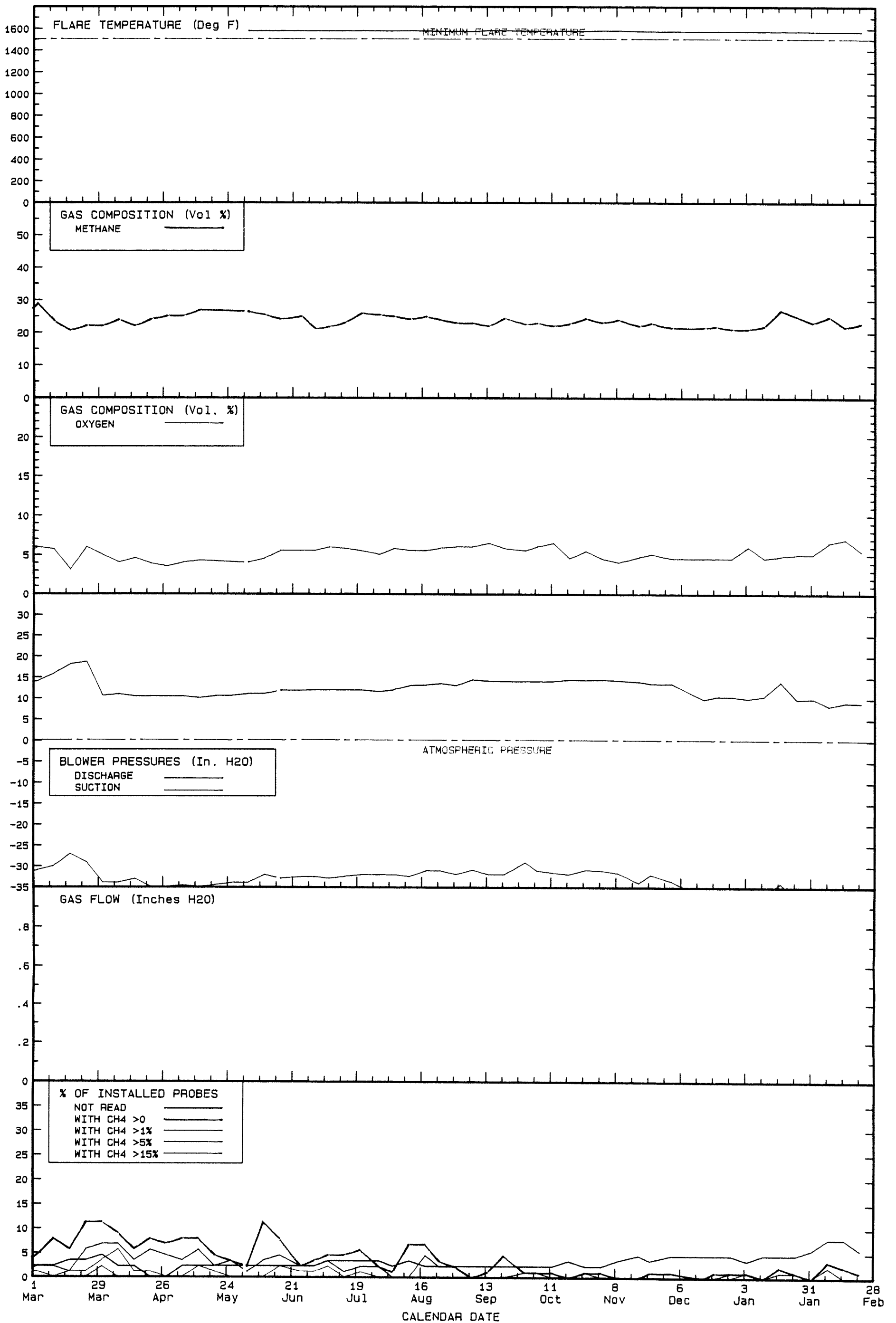
EXHIBIT A (Continued)

MONITORING DATE	1-25	2-1	2-8	2-15	2-22
PROBE	VOLUME % METHANE				
88C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING FEBRUARY 28, 1994**



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 01 APR 94  
WEEKLY MONITORING PERIOD ..... 1 MAR 94 TO 29 MAR 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	83
NO. OF PROBES WITH NO METHANE .....	83
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	0
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	4
NO. OF PROBES NOT REPORTED .....	1

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 9, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 39, PLUGGED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 3-29-94

### 1. FLARE STATION DATA

MONITORING DATE	3-1	3-10	3-15	3-22	3-29
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1575	1575	1577	1575	1580
METHANE (Vol %)	24	26	25	25	23.5
OXYGEN (Vol %)	4.0	3.0	3.0	3.0	3.0
VACUUM (In. H2O)	-38	-37.5	-36.6	-37	-37.5
BACK PRESS. (In. H2O)	9.4	8.9	8.9	8.9	8.7
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	3-1	3-10	3-15	3-22	3-29
PROBE	VOLUME % METHANE				
5A	0.2	0	0	0	0
7A	DST	0	0	0	0
9	DST	DST	LST	DST	DST
24A	0	LST	0	0	0
37	DST	0	0	0	0
38	DST	DST	DST	DST	DST
38B	DST	DST	DST	DST	DST
39	PLG	PLG	PLG	PLG	PLG
43	LST	LST	LST	LST	LST

DST = DESTROYED; LST = LOST; PLG = PLUGGED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	3-1	3-10	3-15	3-22	3-29
PROBE	VOLUME & METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0.2	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	DST	0	0	0	0
8A	0	0	0	0	0
9	DST	DST	LST	DST	DST
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13B	0	0	0	0	0
13C	0	0	0	0	0
13D	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	LST	0	0	0

DST = DESTROYED; LST = LOST

# EXHIBIT A (Continued)

MONITORING DATE	3-1	3-10	3-15	3-22	3-29
PROBE	VOLUME % METHANE				
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
26B	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	DST	0	0	0	0
38	DST	DST	DST	DST	DST
38B	DST	DST	DST	DST	DST
39	PLG	PLG	PLG	PLG	PLG
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	LST	LST	LST	LST	LST
45	0	0	0	0	0
46	0	0	0	0	0
81B	0	0	0	0	0
81C	0	0	0	0	0
82B	0	0	0	0	0
82C	0	0	0	0	0
83B	0	0	0	0	0
83C	0	0	0	0	0
84B	0	0	0	0	0
84C	0	0	0	0	0
85B	0	0	0	0	0
85C	0	0	0	0	0
86B	0	0	0	0	0
86C	0	0	0	0	0
87B	0	0	0	0	0
87C	0	0	0	0	0
88B	0	0	0	0	0

DST = DESTROYED; PLG = PLUGGED; LST = LOST

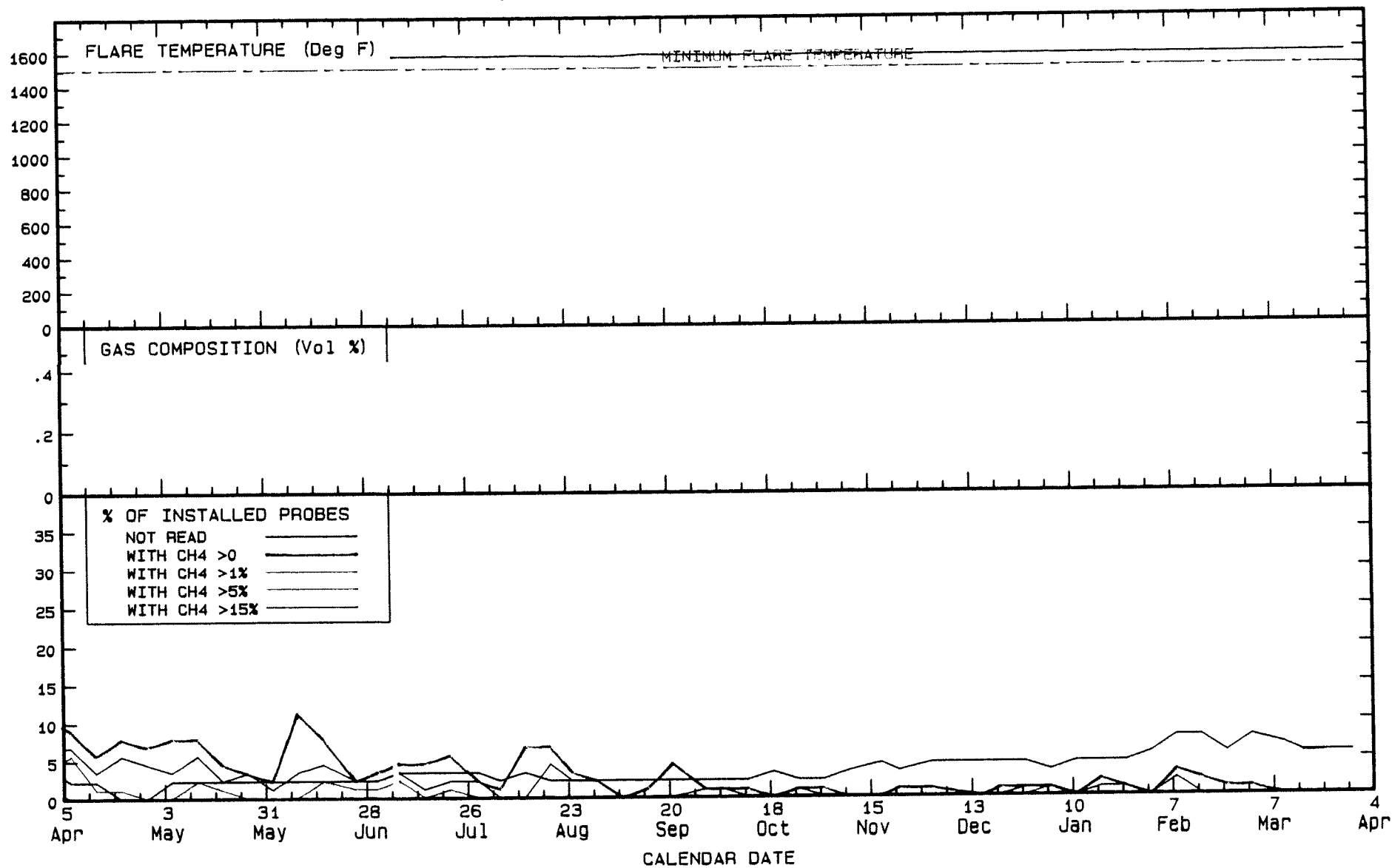
EXHIBIT A (Continued)

MONITORING DATE	3-1	3-10	3-15	3-22	3-29
PROBE	VOLUME % METHANE				
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING APRIL 4, 1994**



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 02 MAY 94  
WEEKLY MONITORING PERIOD ..... 29 MAR 94 TO 26 APR 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	83
NO. OF PROBES WITH NO METHANE .....	82
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	1
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	3
NO. OF PROBES NOT REPORTED .....	2

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

# 42, 1 VOL % METHANE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 9, LOST  
# 37, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 4-26-94

### 1. FLARE STATION DATA

MONITORING DATE	3-29	4-5	4-12	4-19	4-26
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1580	1570	1575	1575	1575
METHANE (Vol %)	23.5	26	23	25	24
OXYGEN (Vol %)	3.0	3.5	4.0	4.0	3.7
VACUUM (In. H2O)	-37.5	-37.3	-35	-35	-37.5
BACK PRESS. (In. H2O)	8.7	8.8	9.0	9.0	8.9
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	3-29	4-5	4-12	4-19	4-26
PROBE	VOLUME % METHANE				
9	DST	LST	DST	DST	LST
11B	0	0	2.5	0	0
15A	0	0	PLG	0	0
16X	0	0	PLG	0	0
23	0	0	PLG	0	0
31	0	0	0	PLG	0
37	0	DST	DST	DST	DST
38	DST	DST	LST	DST	DST
38B	DST	DST	LST	DST	DST
39	PLG	PLG	0	PLG	0
40	0	1	0.1	1	0
41	0	0.2	0	0	0
42	0	0	0	0	1
43	LST	LST	DST	LST	LST
45	0	NRD	NRD	NRD	0

DST = DESTROYED; LST = LOST; PLG = PLUGGED; NRD = NOT REPORTED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	3-29	4-5	4-12	4-19	4-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	<b>DST</b>	<b>LST</b>	<b>DST</b>	<b>DST</b>	<b>LST</b>
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	<b>2.5</b>	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13B	0	0	0	0	0
13C	0	0	0	0	0
13D	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	<b>PLG</b>	0	0
16A	0	0	0	0	0
16X	0	0	<b>PLG</b>	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	<b>PLG</b>	0	0
24	0	0	0	0	0
24A	0	0	0	0	0

DST = DESTROYED; LST = LOST; PLG = PLUGGED

# EXHIBIT A (Continued)

MONITORING DATE	3-29	4-5	4-12	4-19	4-26
PROBE	VOLUME % METHANE				
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
26B	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	PLG	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	DST	DST	DST	DST
38	DST	DST	LST	DST	DST
38B	DST	DST	LST	DST	DST
39	PLG	PLG	0	PLG	0
40	0	1	0.1	1	0
41	0	0.2	0	0	0
42	0	0	0	0	1
43	LST	LST	DST	LST	LST
45	0	NRD	NRD	NRD	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0

PLG = PLUGGED; DST = DESTROYED; LST = LOST; NRD = NOT REPORTED

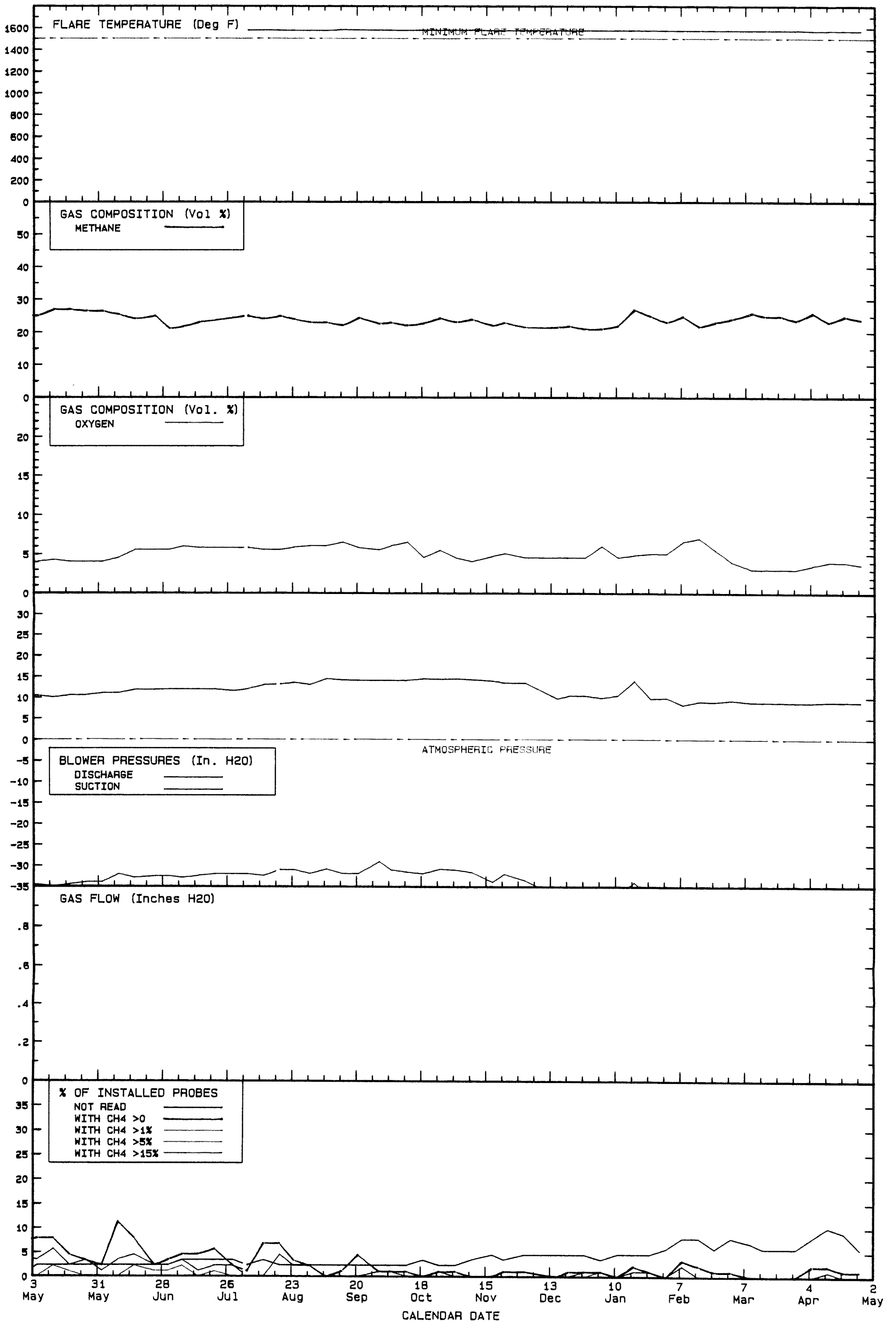
EXHIBIT A (Continued)

MONITORING DATE	3-29	4-5	4-12	4-19	4-26
PROBE	VOLUME % METHANE				
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING MAY 2, 1994**



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 03 JUL 94  
WEEKLY MONITORING PERIOD ..... 31 MAY 94 TO 28 JUN 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	79
NO. OF PROBES WITH NO METHANE .....	78
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	1
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	3
NO. OF PROBES NOT REPORTED .....	6

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

# 40, .7 VOL % METHANE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 9, LOST  
# 13A, LOST  
# 13D, LOST  
# 29B, LOST  
# 29C, LOST  
# 37, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 6-28-94

### 1. FLARE STATION DATA

MONITORING DATE	5-31	6-7	6-14	6-21	6-28
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1570	1570	1575	1572	1573
METHANE (Vol %)	22	24.8	26	25.2	19.9
OXYGEN (Vol %)	5.0	4.3	4.3	4.4	6.8
VACUUM (In. H2O)	-36	-36	-36	-36.1	-36
BACK PRESS. (In. H2O)	9.0	8.5	8.4	8.6	8.6
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	5-31	6-7	6-14	6-21	6-28
PROBE	VOLUME % METHANE				
9	DST	DST	DST	DST	LST
128	0	0	LST	0	0
13A	0	0	LST	LST	LST
13D	0	0	0	0	LST
15A	0	0	LST	0	0
16X	0	0	LST	0	0
17A	0	0	LST	0	0
298	0	0	0	DST	LST
29C	0	0	0	LST	LST
37	DST	DST	DST	DST	DST
38	DST	DST	DST	DST	DST
388	DST	DST	DST	DST	DST
39	PLG	0	PLG	0	0
40	0.7	1.7	2.5	0.6	0.7
43	DST	LST	DST	LST	LST
45	NRD	NRD	NRD	NRD	0

DST = DESTROYED; LST = LOST; PLG = PLUGGED; NRD = NOT REPORTED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	5-31	6-7	6-14	6-21	6-28
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	DST	DST	DST	DST	LST
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	LST	0	0
13A	0	0	LST	LST	LST
13B	0	0	0	0	0
13C	0	0	0	0	0
13D	0	0	0	0	LST
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	LST	0	0
16A	0	0	0	0	0
16X	0	0	LST	0	0
17A	0	0	LST	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0

DST = DESTROYED; LST = LOST

# EXHIBIT A (Continued)

MONITORING DATE	5-31	6-7	6-14	6-21	6-28
PROBE	VOLUME % METHANE				
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
26B	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	DST	LST
29C	0	0	0	LST	LST
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	DST	DST	DST	DST	DST
38	DST	DST	DST	DST	DST
38B	DST	DST	DST	DST	DST
39	PLG	0	PLG	0	0
40	0.7	1.7	2.5	0.6	0.7
41	0	0	0	0	0
42	0	0	0	0	0
43	DST	LST	DST	LST	LST
45	NRD	NRD	NRD	NRD	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0

DST = DESTROYED; LST = LOST; PLG = PLUGGED; NRD = NOT REPORTED

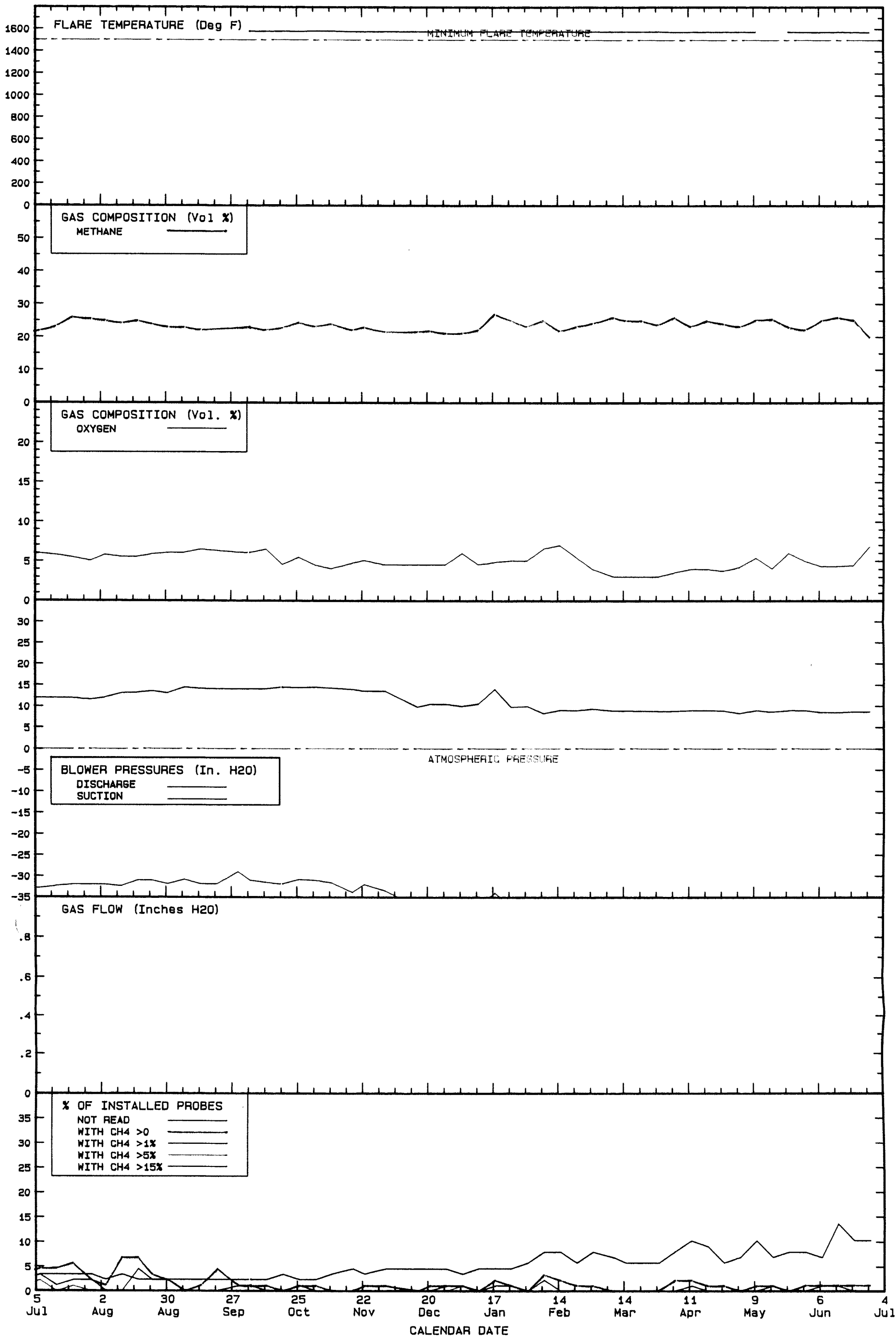
EXHIBIT A (Continued)

MONITORING DATE	5-31	6-7	6-14	6-21	6-28
PROBE	VOLUME % METHANE				
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING JULY 4, 1994



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 05 AUG 94  
WEEKLY MONITORING PERIOD ..... 28 JUN 94 TO 26 JUL 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	80
NO. OF PROBES WITH NO METHANE .....	80
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	0
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	5
NO. OF PROBES NOT REPORTED .....	3

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 9, LOST  
# 13A, LOST  
# 13D, LOST  
# 29B, DESTROYED  
# 35, DESTROYED  
# 37, DESTROYED  
# 38B, DESTROYED  
# 43, DESTROYED

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 7-26-94

### 1. FLARE STATION DATA

MONITORING DATE	6-28	7-5	7-12	7-19	7-26
START TIME	--	--	--	0830	1200
TEMPERATURE (Deg F)	1573	1576	1572	1579	1573
METHANE (Vol %)	19.9	24.4	24	20.9	23.9
OXYGEN (Vol %)	6.8	3.8	4.0	5.5	3.4
VACUUM (In. H2O)	-36	-36.8	-34	-36.5	-31.6
BACK PRESS. (In. H2O)	8.6	7.6	9.8	8.7	9.8
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	6-28	7-5	7-12	7-19	7-26
PROBE	VOLUME % METHANE				
9	LST	LST	LST	LST	LST
13A	LST	LST	LST	LST	LST
13D	LST	LST	LST	LST	LST
298	LST	LST	LST	DST	DST
29C	LST	LST	LST	DST	0
35	0	0	0	DST	DST
37	DST	DST	DST	LST	DST
38	DST	DST	DST	LST	0
388	DST	DST	DST	LST	DST
40	0.7	0	0	0	0
43	LST	LST	LST	LST	DST

LST = LOST; DST = DESTROYED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	6-28	7-5	7-12	7-19	7-26
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	LST	LST	LST	LST	LST
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	LST	LST	LST	LST	LST
13B	0	0	0	0	0
13C	0	0	0	0	0
13D	LST	LST	LST	LST	LST
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0

LST = LOST

# EXHIBIT A (Continued)

MONITORING DATE	6-28	7-5	7-12	7-19	7-26
PROBE	VOLUME % METHANE				
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
26B	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	LST	LST	LST	DST	DST
29C	LST	LST	LST	DST	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	DST	DST
36B	0	0	0	0	0
37	DST	DST	DST	LST	DST
38	DST	DST	DST	LST	0
38B	DST	DST	DST	LST	DST
39	0	0	0	0	0
40	0.7	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	LST	LST	LST	LST	DST
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0

LST = LOST; DST = DESTROYED

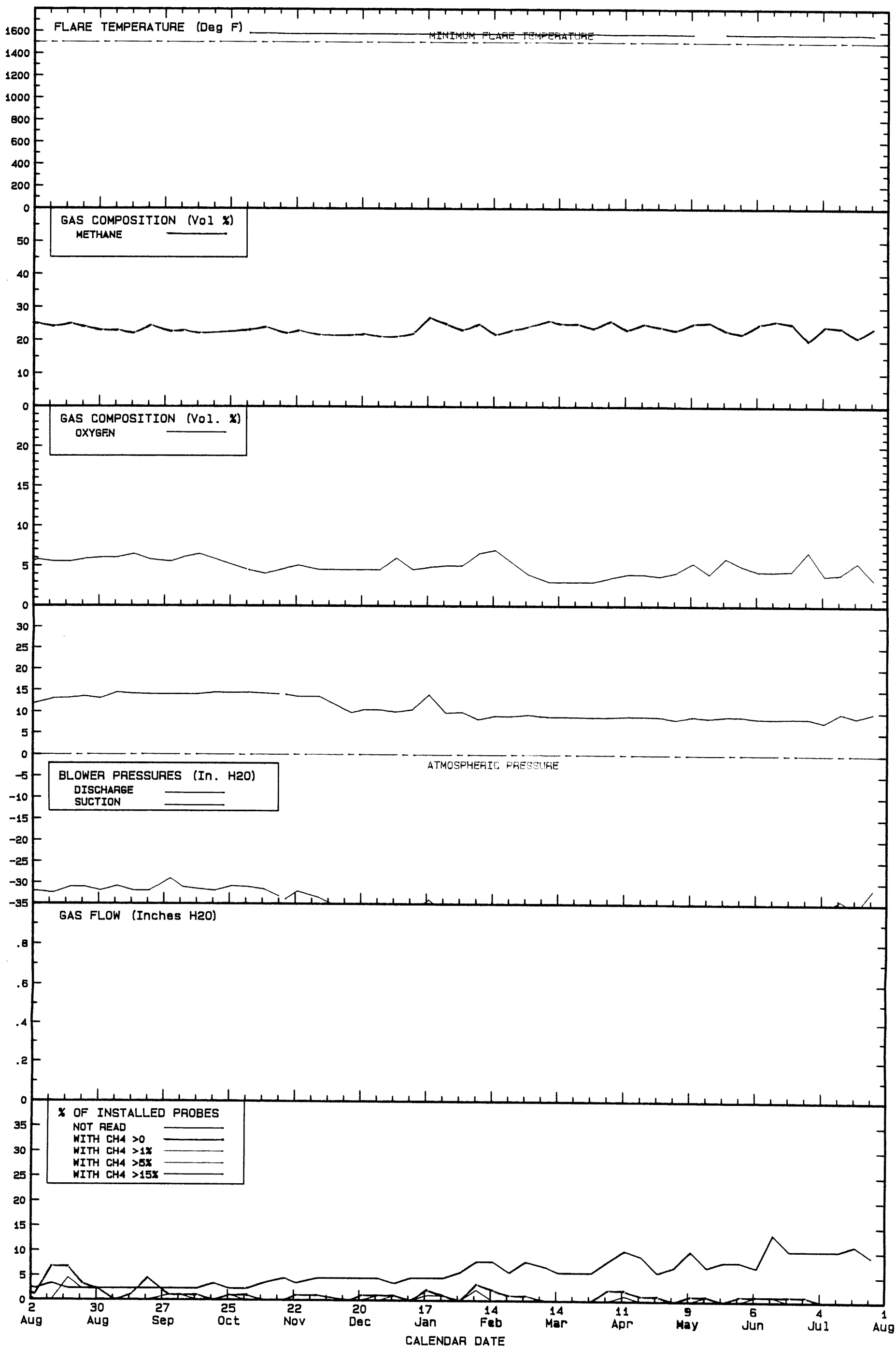
EXHIBIT A (Continued)

MONITORING DATE	6-28	7-5	7-12	7-19	7-26
PROBE	VOLUME % METHANE				
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING AUGUST 1, 1994



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 06 SEP 94  
WEEKLY MONITORING PERIOD ..... 2 AUG 94 TO 30 AUG 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	78
NO. OF PROBES WITH NO METHANE .....	78
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	0
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	7
NO. OF PROBES NOT REPORTED .....	3

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 9, LOST  
# 13A, LOST  
# 13D, LOST  
# 29B, DESTROYED  
# 29C, DESTROYED  
# 35, DESTROYED  
# 37, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 43, DESTROYED

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 8-30-94

### 1. FLARE STATION DATA

MONITORING DATE	8-2	8-8	8-16	8-23	8-30
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1571	1573	1578	1576	1568
METHANE (Vol %)	21.7	24.1	22	22.4	20
OXYGEN (Vol %)	3.7	3.8	3.6	4.2	4.1
VACUUM (In. H2O)	-35.2	-34	-35.1	-34	-36
BACK PRESS. (In. H2O)	9.5	8.9	9.2	8.9	9.2
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	8-2	8-8	8-16	8-23	8-30
PROBE	VOLUME % METHANE				
7A	LST	LST	LST	0	0
9	LST	LST	DST	LST	LST
13A	LST	DST	DST	0	LST
138	0	0	0	DST	0
13C	0	0	0	DST	0
130	LST	DST	DST	0	LST
298	LST	LST	DST	DST	DST
29C	LST	LST	DST	DST	DST
35	DST	DST	DST	DST	DST
37	LST	DST	DST	DST	DST
38	LST	DST	DST	DST	DST
388	LST	DST	DST	DST	DST
43	LST	LST	DST	DST	DST

LST = LOST; DST = DESTROYED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	8-2	8-8	8-16	8-23	8-30
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	LST	LST	LST	0	0
8A	0	0	0	0	0
9	LST	LST	DST	LST	LST
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	LST	DST	DST	0	LST
13B	0	0	0	DST	0
13C	0	0	0	DST	0
13D	LST	DST	DST	0	LST
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0

LST = LOST; DST = DESTROYED

# EXHIBIT A (Continued)

MONITORING DATE	8-2	8-8	8-16	8-23	8-30
PROBE	VOLUME % METHANE				
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
26B	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	LST	LST	DST	DST	DST
29C	LST	LST	DST	DST	DST
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	DST	DST	DST	DST	DST
36B	0	0	0	0	0
37	LST	DST	DST	DST	DST
38	LST	DST	DST	DST	DST
38B	LST	DST	DST	DST	DST
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	LST	LST	DST	DST	DST
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0

LST = LOST; DST = DESTROYED

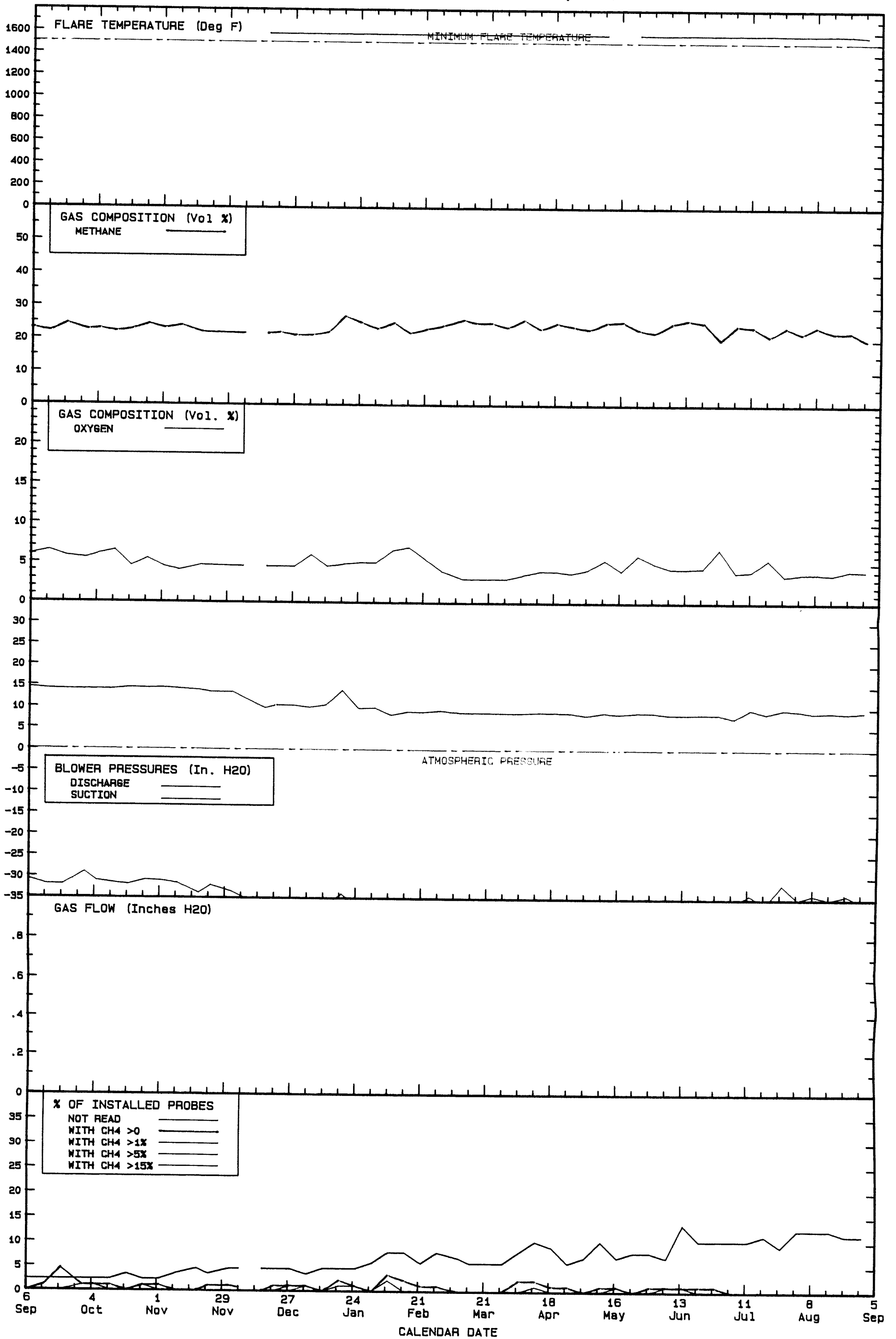
EXHIBIT A (Continued)

MONITORING DATE	8-2	8-8	8-16	8-23	8-30
PROBE	VOLUME % METHANE				
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING SEPTEMBER 5, 1994**



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 30 SEP 94  
WEEKLY MONITORING PERIOD ..... 30 AUG 94 TO 27 SEP 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	77
NO. OF PROBES WITH NO METHANE .....	77
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	0
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	4
NO. OF PROBES NOT REPORTED .....	7

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 7, LOST  
# 9, LOST  
# 13A, LOST  
# 13D, LOST  
# 29B, LOST  
# 29C, LOST  
# 35, DESTROYED  
# 37, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 9-27-94

### 1. FLARE STATION DATA

MONITORING DATE	8-30	9-6	9-13	9-20	9-27
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1568	1579	1570	1572	1575
METHANE (Vol %)	20	19.6	27.5	25.6	25
OXYGEN (Vol %)	4.1	6.3	2.9	4.4	3.5
VACUUM (In. H2O)	-36	-35.4	-34.5	-36.8	--
BACK PRESS. (In. H2O)	9.2	9.2	8.0	8.2	7.5
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	8-30	9-6	9-13	9-20	9-27
PROBE	VOLUME % METHANE				
7	0	0	DST	0	LST
9	LST	LST	LST	DST	LST
13A	LST	LST	DST	LST	LST
13D	LST	LST	LST	LST	LST
29B	DST	DST	LST	DST	LST
29C	DST	DST	LST	DST	LST
35	DST	DST	DST	DST	DST
37	DST	DST	DST	DST	DST
38	DST	DST	DST	DST	DST
38B	DST	DST	DST	DST	DST
42	0	0	0	0.1	0
43	DST	DST	LST	DST	LST

DST = DESTROYED; LST = LOST

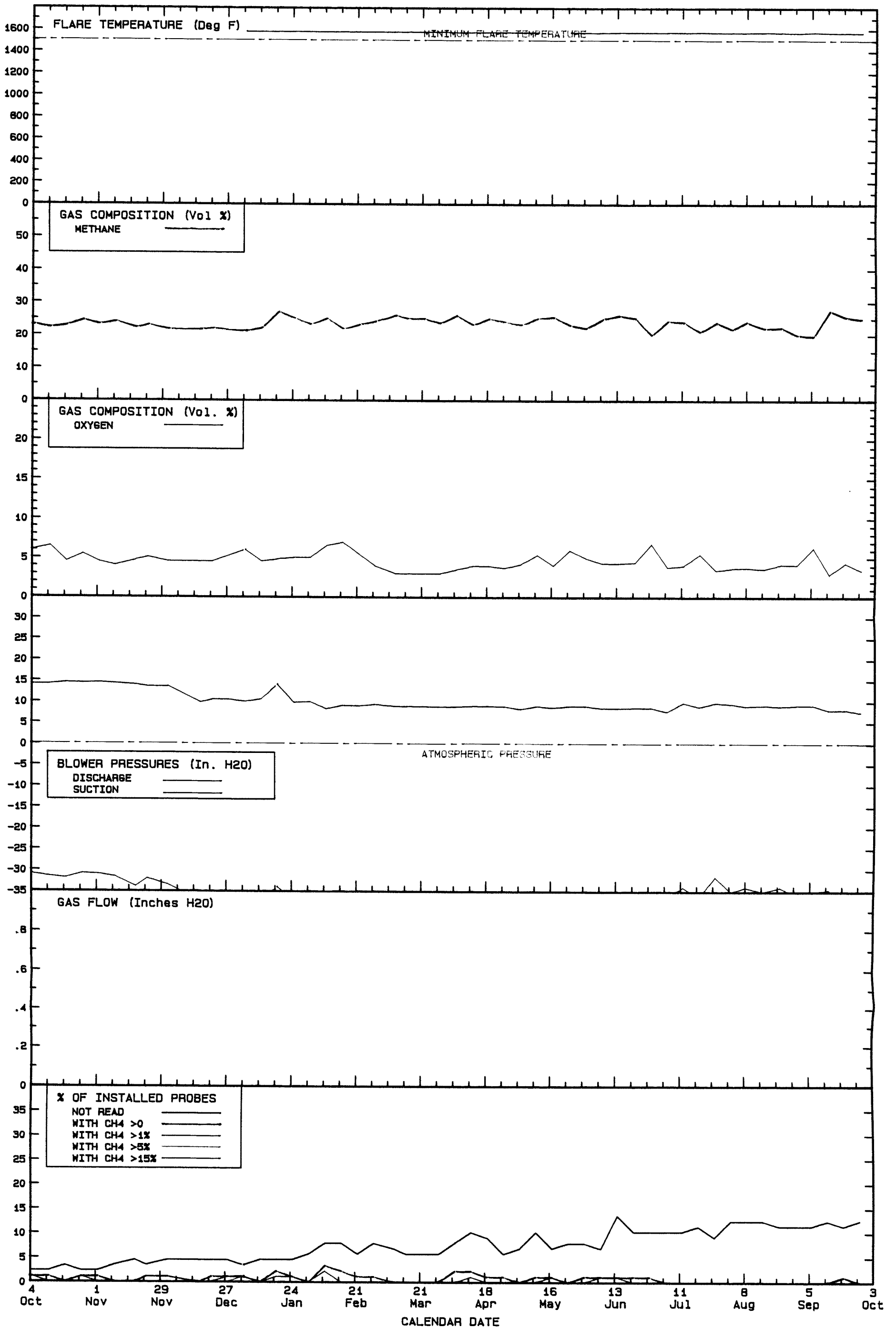
# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	8-30	9-6	9-13	9-20	9-27
PROBE	VOLUME & METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	DST	0	LST
7A	0	0	0	0	0
8A	0	0	0	0	0
9	LST	LST	LST	DST	LST
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	LST	LST	DST	LST	LST
13B	0	0	0	0	0
13C	0	0	0	0	0
13D	LST	LST	LST	LST	LST
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0

DST = DESTROYED; LST = LOST

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING OCTOBER 3, 1994**



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 08 NOV 94  
WEEKLY MONITORING PERIOD ..... 27 SEP 94 TO 24 OCT 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	79
NO. OF PROBES WITH NO METHANE .....	79
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	0
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	4
NO. OF PROBES NOT REPORTED .....	5

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

# 9, LOST  
# 13A, LOST  
# 29B, LOST  
# 29C, LOST  
# 35, DESTROYED  
# 37, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

# EXHIBIT A

## MONITORING DATA HEWITT LANDFILL

ONE MONTH ENDING 10-24-94

### 1. FLARE STATION DATA

MONITORING DATE	9-27	10-4	10-11	10-18	10-24
START TIME	--	--	--	--	--
TEMPERATURE (Deg F)	1575	1575	1575	1571	1575
METHANE (Vol %)	25	26.4	26.4	24.8	23.8
OXYGEN (Vol %)	3.5	2.4	3.4	3.4	4.9
VACUUM (In. H2O)	--	-37.9	-37	-38.5	-38
BACK PRESS. (In. H2O)	7.5	8.0	7.4	8.0	7.8
GAS FLOW (In. H2O)	--	--	--	--	--

### 2. PROBLEM PROBES

MONITORING DATE	9-27	10-4	10-11	10-18	10-24
PROBE	VOLUME % METHANE				
7	LST	0	NRD	0	0
7A	0	LST	0	0	0
9	LST	LST	NRD	LST	LST
13A	LST	LST	NRD	LST	LST
130	LST	LST	NRD	LST	0
15A	0	0	0	PLG	0
29B	LST	DST	NRD	LST	LST
29C	LST	DST	NRD	NRD	LST
35	DST	DST	NRD	DST	DST
37	DST	DST	NRD	DST	DST
38	DST	DST	NRD	DST	DST
388	DST	DST	NRD	DST	DST
43	LST	LST	NRD	LST	LST
45	0	0	NRD	0	0

LST = LOST; NRD = NOT REPORTED; PLG = PLUGGED; DST = DESTROYED

# EXHIBIT A (Continued)

## 3. ALL PROBES

MONITORING DATE	9-27	10-4	10-11	10-18	10-24
PROBE	VOLUME % METHANE				
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
SELF STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	LST	0	NRD	0	0
7A	0	LST	0	0	0
8A	0	0	0	0	0
9	LST	LST	NRD	LST	LST
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	LST	LST	NRD	LST	LST
13B	0	0	0	0	0
13C	0	0	0	0	0
13D	LST	LST	NRD	LST	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	PLG	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0

LST = LOST; NRD = NOT REPORTED; PLG = PLUGGED

# EXHIBIT A (Continued)

MONITORING DATE	9-27	10-4	10-11	10-18	10-24
PROBE	VOLUME % METHANE				
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
26B	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	LST	DST	NRD	LST	LST
29C	LST	DST	NRD	NRD	LST
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	DST	DST	NRD	DST	DST
36B	0	0	0	0	0
37	DST	DST	NRD	DST	DST
38	DST	DST	NRD	DST	DST
38B	DST	DST	NRD	DST	DST
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0
43	LST	LST	NRD	LST	LST
45	0	0	NRD	0	0
46	0	0	0	0	0
81B	0	0	0	0	0
81C	0	0	0	0	0
82B	0	0	0	0	0
82C	0	0	0	0	0
83B	0	0	0	0	0
83C	0	0	0	0	0
84B	0	0	0	0	0
84C	0	0	0	0	0
85B	0	0	0	0	0
85C	0	0	0	0	0
86B	0	0	0	0	0
86C	0	0	0	0	0
87B	0	0	0	0	0
87C	0	0	0	0	0
88B	0	0	0	0	0

LST = LOST; DST = DESTROYED; NRD = NOT REPORTED

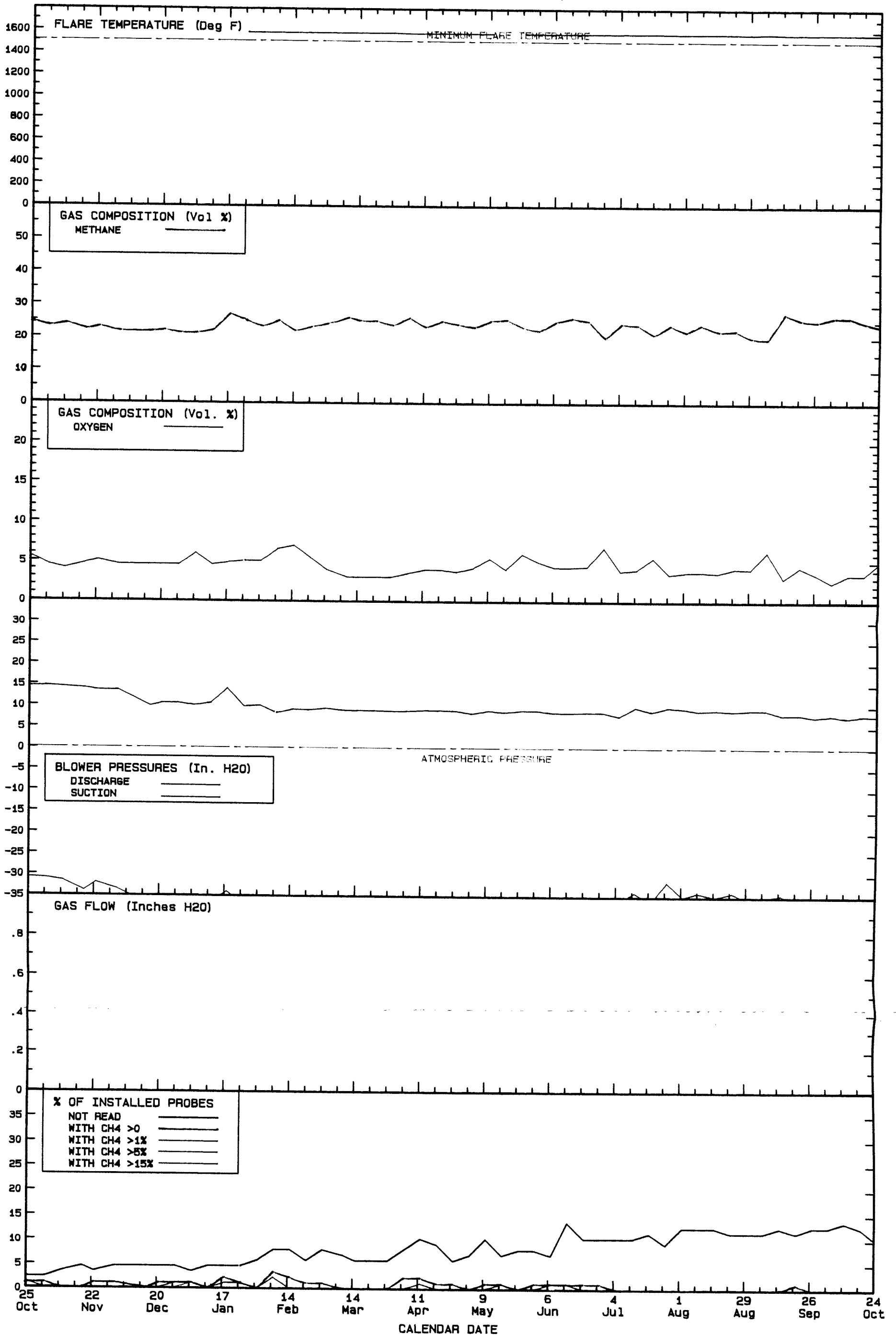
EXHIBIT A (Continued)

MONITORING DATE	9-27	10-4	10-11	10-18	10-24
PROBE	VOLUME % METHANE				
B8C	0	0	0	0	0

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING OCTOBER 24, 1994



EXECUTIVE SUMMARY

FLARE AND GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 03 DEC 94  
WEEKLY MONITORING PERIOD ..... 24 OCT 94 TO 29 NOV 94

SUMMARY, END OF REPORTING PERIOD

NO. OF PROBES INSTALLED .....	88
NO. OF PROBES MONITORED .....	79
NO. OF PROBES WITH NO METHANE .....	79
NO. OF PROBES WITH TRACE TO 4.9% METHANE .....	0
NO. OF PROBES WITH 5% TO 15% METHANE .....	0
NO. OF PROBES WITH MORE THAN 15% METHANE .....	0
NO. OF PROBES REQUIRING MAINTENANCE .....	6
NO. OF PROBES NOT REPORTED .....	3

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS

PROBES CONTAINING METHANE, END OF REPORTING PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORTING PERIOD

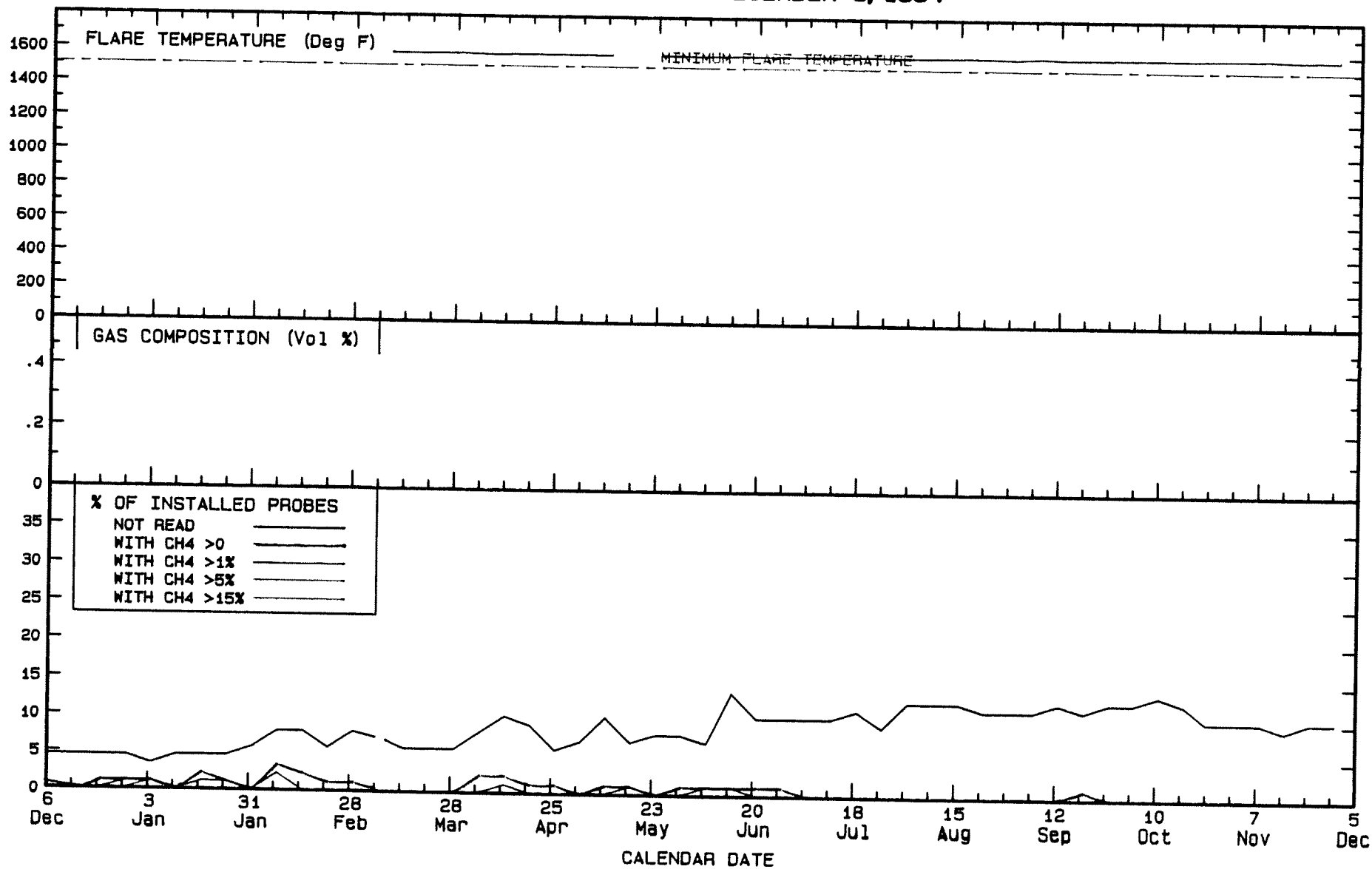
# 9, LOST  
# 13A, LOST  
# 29B, DESTROYED  
# 29C, DESTROYED  
# 35, DESTROYED  
# 37, DESTROYED  
# 38, DESTROYED  
# 38B, DESTROYED  
# 43, LOST

\* \* \* \* \*

Report Prepared By

GROVESPRING ASSOCIATES, INC.  
(310) 377-8753

**EXHIBIT B**  
**HEWITT LANDFILL**  
**FLARE STATION / PROBE DATA**  
**ONE YEAR ENDING DECEMBER 5, 1994**





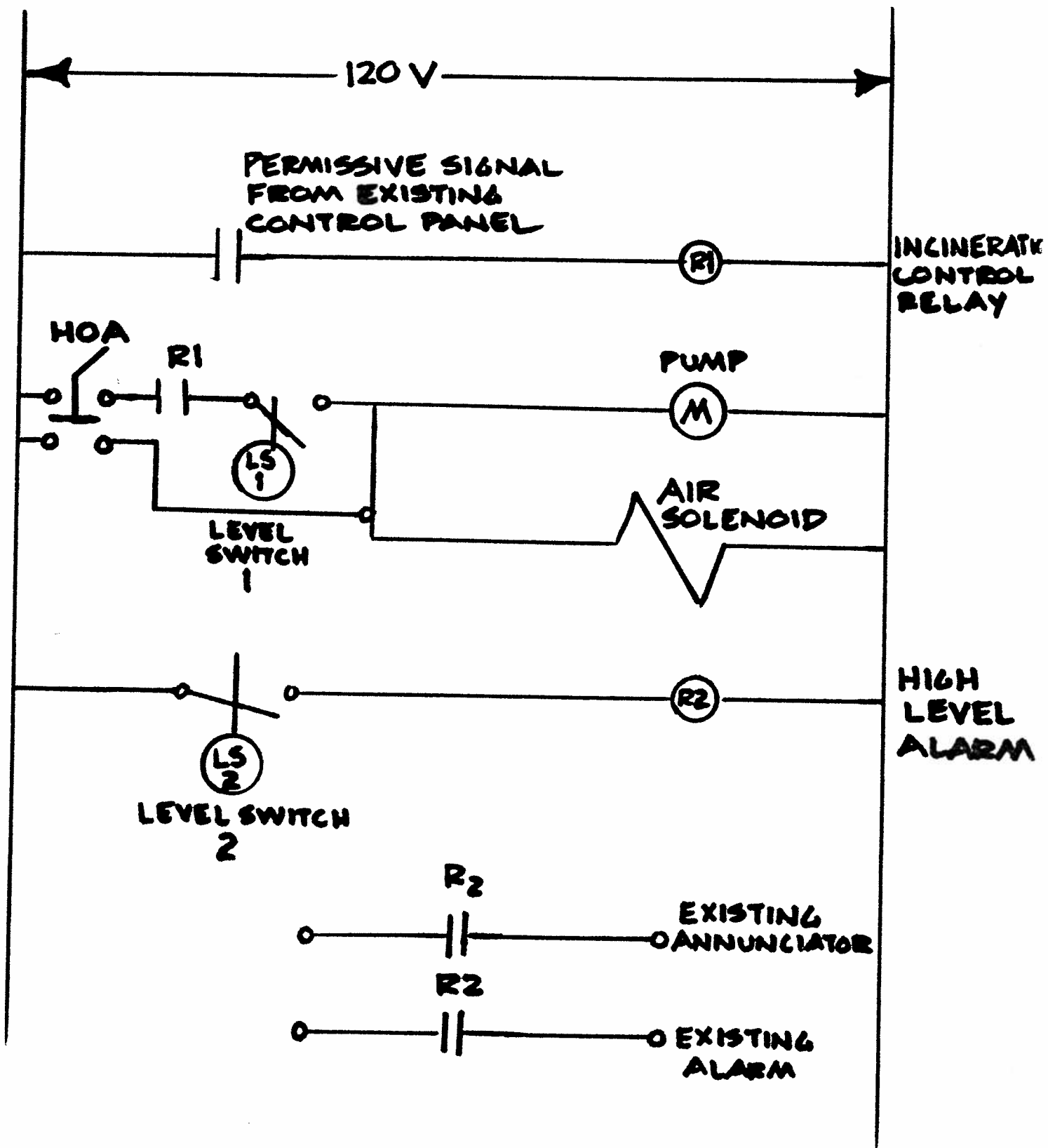
# FLARE SYSTEM MODIFICATIONS

## SKETCHES ATTACHED:

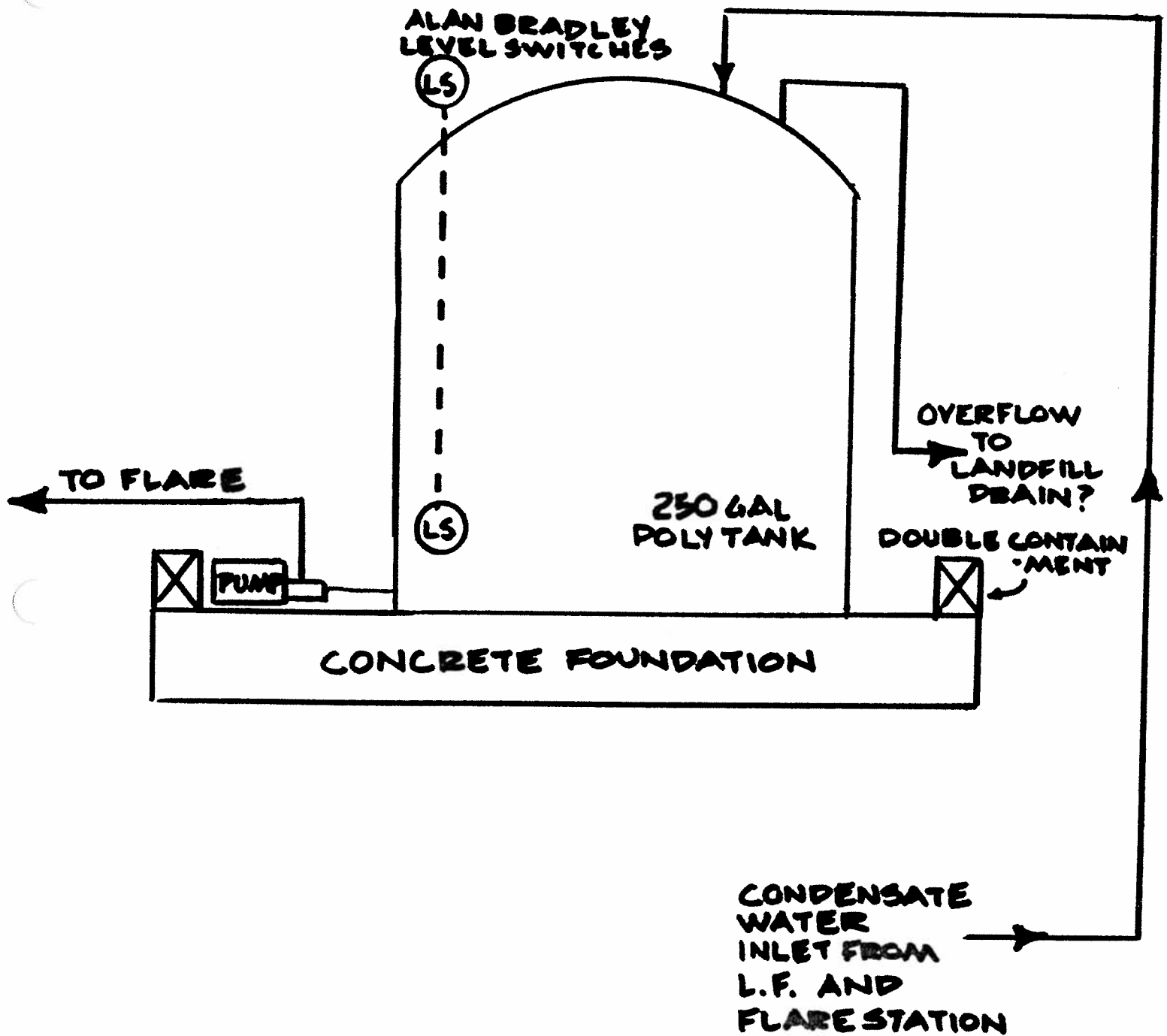
- FLARE STATION CONTROLS
- CONDENSATE WATER TANK
- FLARE MODIFICATIONS

Note: Air compressor will be in a shed.

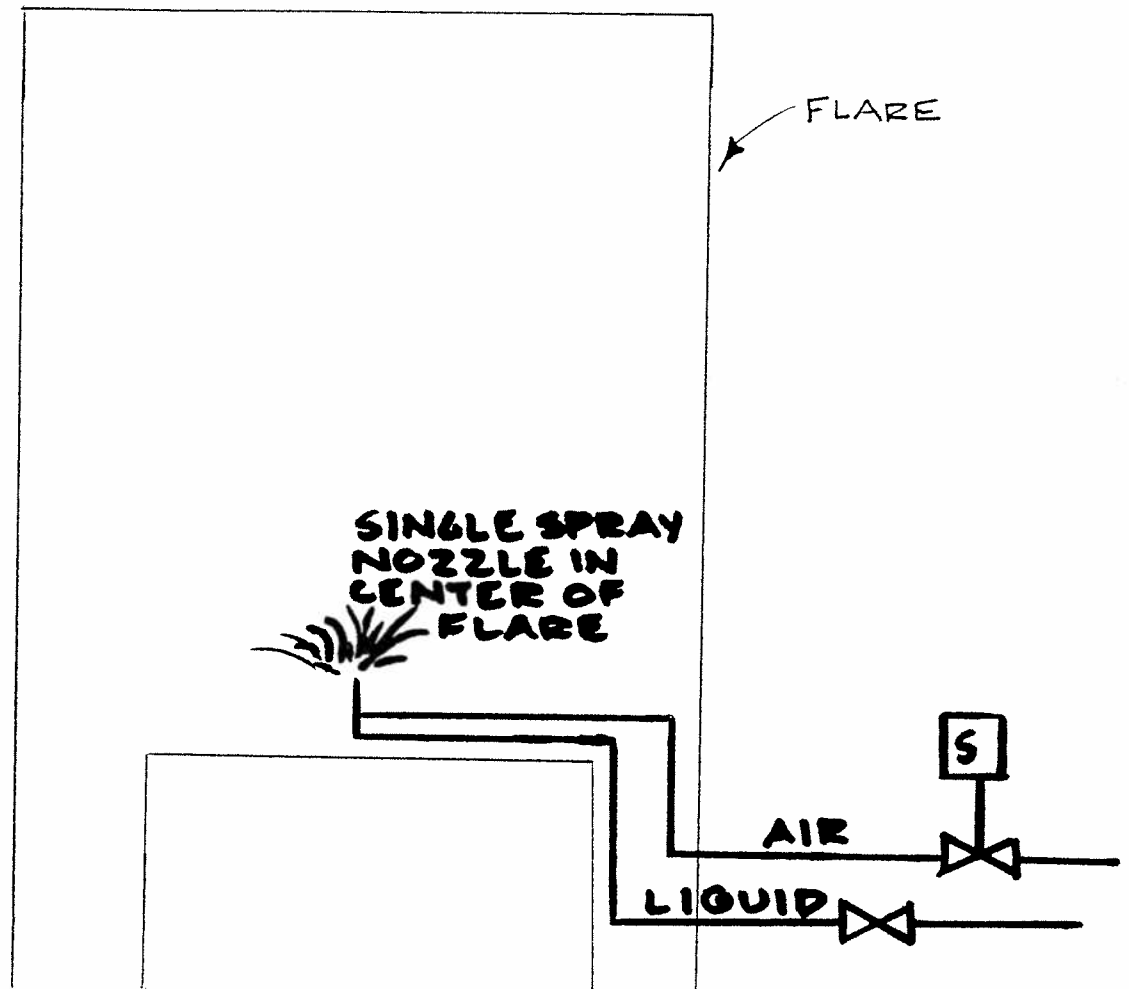
# FLARE STATION CONTROLS



# CONDENSATE TANK



# FLARE MODIFICATIONS

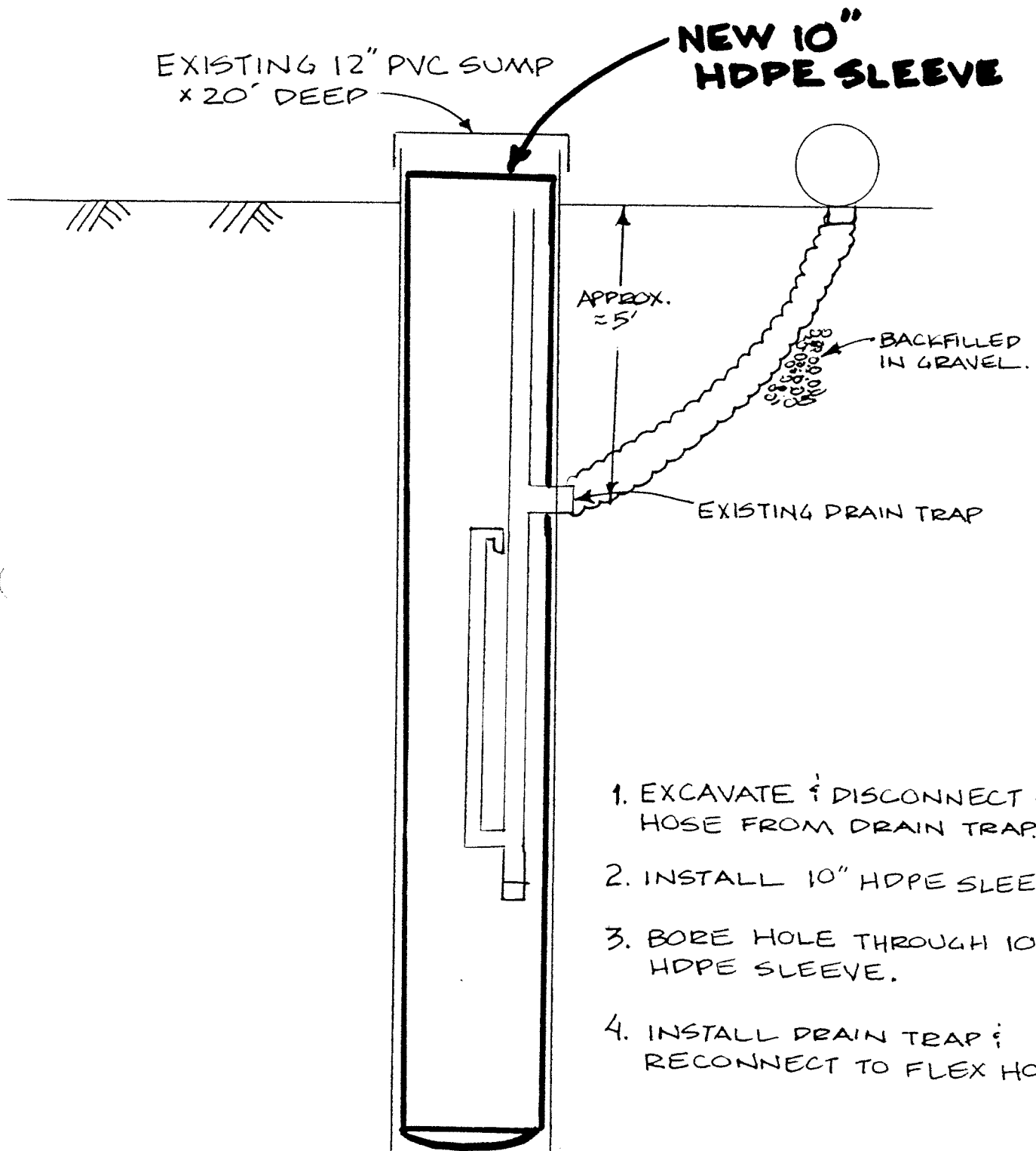


# **FIELD MODIFICATIONS**

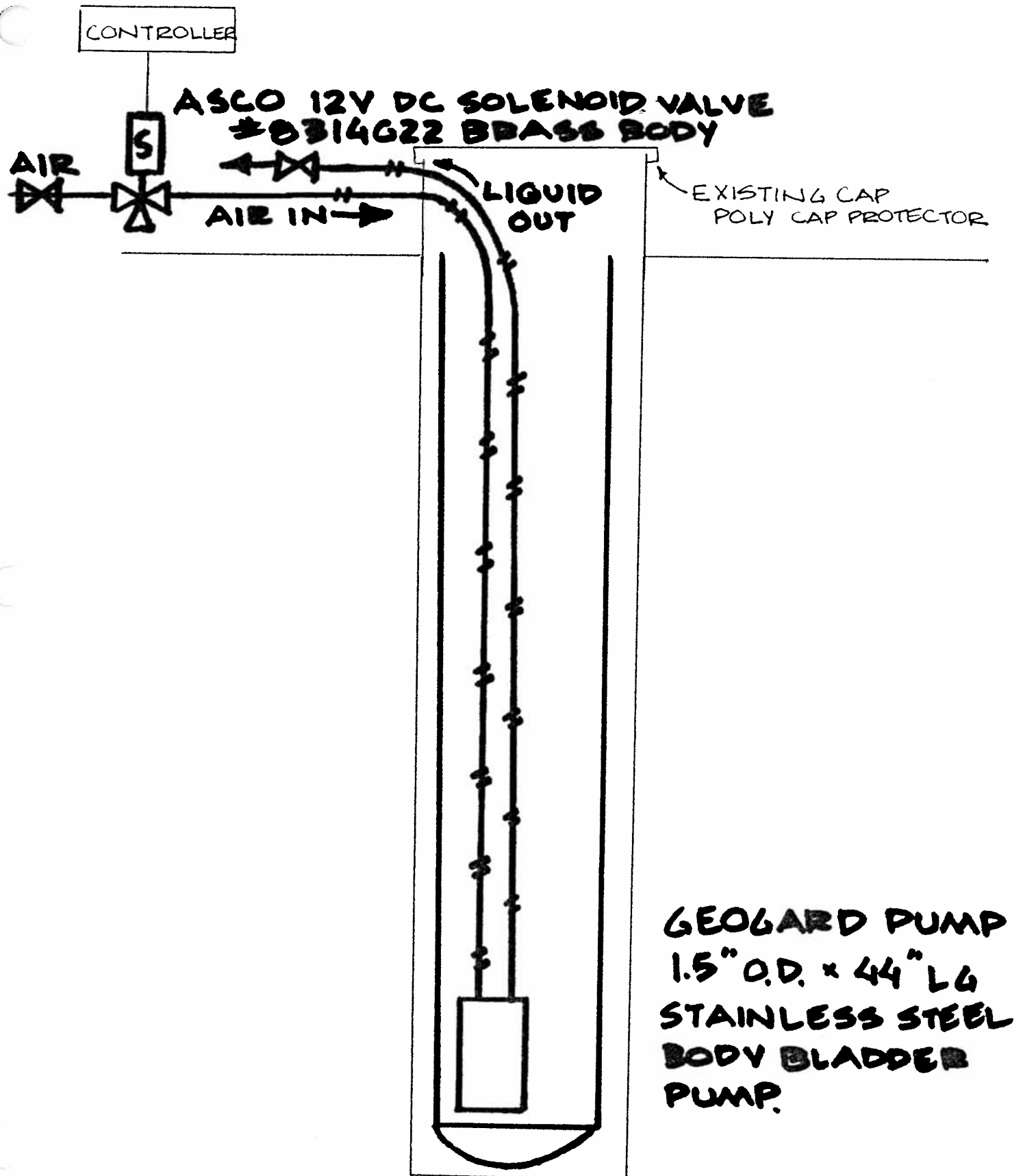
## **SKETCHES ATTACHED:**

- **SUMP RETROFIT**
- **SUMP PUMP INSTALLATION**
- **SUMP PUMP CONTROLLER**
- **ON GRADE UTILITIES**

# SUMP RETROFIT

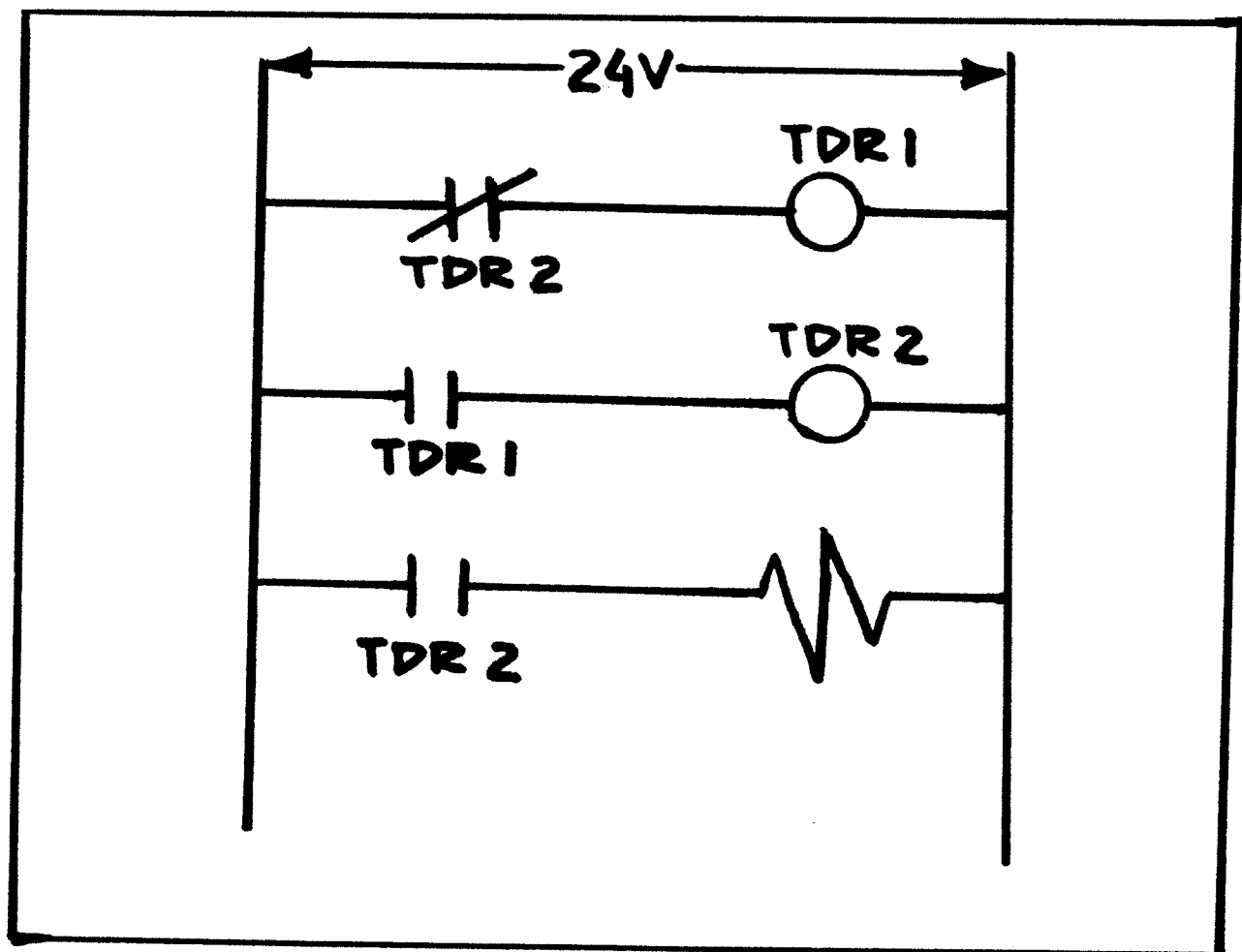


# SUMP PUMP INSTALLATION



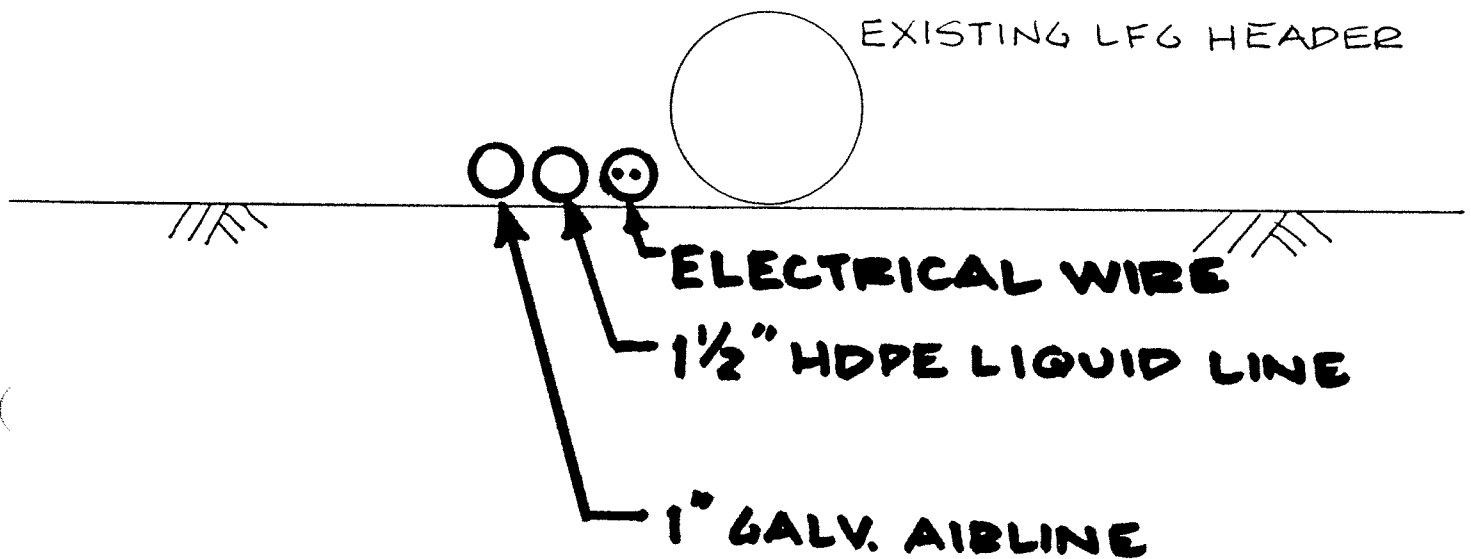
# FIELD SUMP CONTROLLER

24 VOLT DC SYSTEM



NEMA 3R  
ENCLOSURE

# ON GRADE UTILITIES



- BUNDLE AND INSTALL ELECT. WIRE, HDPE & GALV. AIR LINE NEXT TO EXISTING HEADER. NO TRENCHING REQUIRED FOR MOST OF SITE.



# GAS CONTROL ENGINEERING, INC.

By KH Date 2/1/94 Subject HEWITT LANDFILL EMISSION Sheet No. 1 of 4  
Chkd. By R. PROSSER Date 2/15/94 Proj. No. 1003-1

## PURPOSE —

THE PURPOSE OF THESE CALCULATIONS IS TO DETERMINE THE AMOUNT OF EMISSIONS OF CERTAIN COMPOUNDS FROM THE HEWITT LANDFILL PLANT FOR THE YEAR 1993. THE COMPOUNDS OF INTEREST ARE:

1. ORGANIC GASES
2. METHANE
3. NITROGEN DIOXIDE
4. SULFUR DIOXIDE
5. CARBON MONOXIDE

THESE ARE THE COMPOUNDS LISTED ON SHEET B1 OF THE SCAQMD REPORT FORM

## APPROACH —

THE APPROACH USED IN THESE CALCULATIONS IS TO CALCULATE EMISSION FACTORS FOR THE 5 COMPOUNDS LISTED ABOVE. THESE EMISSION FACTORS ARE IN UNITS OF POUNDS EMITTED PER MILLION STANDARD CUBIC FEET OF LANDFILL GAS BURNED (#/MMSCF). THESE EMISSION FACTORS ARE CALCULATED FROM DATA GIVEN IN THE 1990 SOURCE TEST REPORT BY HORIZON AIR MEASUREMENT SERVICES (ATTACHED). THESE EMISSION FACTORS WILL BE USED WITH CURRENT LFG FLOW DATA TO CALCULATE POUNDS PER YEAR OF EMISSIONS USING THE EQUATION:

$$\textcircled{1} \quad \underset{\substack{\uparrow \\ \text{EMISSIONS}}}{\#/\text{YR}} = \underset{\substack{\uparrow \\ \text{FLOW}}}{\text{MMSCF/YR}} \times \underset{\substack{\uparrow \\ \text{EMISSION FACTOR}}}{\#/\text{MMSCF}}$$

# GAS CONTROL ENGINEERING, INC.

By KH Date 2/9/94 Subject \_\_\_\_\_ Sheet No. 2 of 4  
Chkd. By R. Prosser Date 2/15/94 Proj. No. 1003-1

## ASSUMPTIONS -

IT IS ESTIMATED THAT THE LFG FLOW RATE DURING THE SOURCE TEST WAS 1350 SCFM. THIS WAS THE CURRENT FLOW RATE AT THE TIME OF THE ANNUAL EMISSIONS REPORT FOR THE YEAR 1991. A 1993 AVERAGE ANNUAL FLOW RATE OF 1034 SCFM OF LFG IS USED IN THESE CALCULATIONS (SEE SHEET 4)

SOURCE TEST DATA - (ATTACHED)

EXHAUST GAS FLOW = 44,000 ACFM

<u>COMPOUND</u>	<u>EMISSION RATE</u>
REACTIVE ORGANIC CARBON AS CH <sub>4</sub> (ROG)	0.035 #/HR
METHANE	2.79 PPM
OXIDES OF NITROGEN	0.57 #/HR
SULFURE AS H <sub>2</sub> S (IN RAW GAS)	21.5 PPM
CARBON MONOXIDE	0.25 #/HR
PARTICULATE MATTER	1.3 #/HR

## CALCULATIONS -

1. CALCULATE ANNUAL LFG FLOW IN MMSCF/YR.

$$1350 \frac{\text{FT}^3}{\text{MIN}} \times 525,600 \frac{\text{MIN}}{\text{YR}} \times \frac{1}{10^6} = 709.56 \text{ MMSCF/YR}$$

2. CALCULATE ROG EMISSION FACTOR

$$0.035 \frac{\#}{\text{HR}} \times 8760 \frac{\text{HR}}{\text{YR}} \times \frac{\text{YR}}{709.56 \text{ MMSCF}} = 0.43 \frac{\#}{\text{MMSCF}}$$

# GAS CONTROL ENGINEERING, INC.

By KH Date 2/9/94 Subject \_\_\_\_\_ Sheet No. 3 of 4

Chkd. By R. Prosser Date 2/15/94 \_\_\_\_\_ Proj. No. 1003-1

3. CALCULATE METHANE EMISSION FACTOR:

$$\frac{2.79 \text{ Fe}^3_{\text{CH}_4}}{\text{MMACF}_{\text{EXHAUST}}} \times \frac{44,000 \text{ MMACF}_{\text{EXHAUST}}}{1,350 \text{ MMSCF}_{\text{LFG}}} \times \frac{0.042 \text{ }^{\#}\text{CH}_4}{\text{Fe}^3_{\text{CH}_4}} = 3.82 \text{ }^{\#}/\text{MMSCF}$$

4. CALCULATE NO<sub>2</sub> EMISSION FACTOR:

$$\frac{0.57 \text{ }^{\#}}{\text{HR}} \times \frac{8,760 \text{ HR}}{\text{YR}} \times \frac{\text{YR}}{709.56 \text{ MMSCF}} = 7.04 \text{ }^{\#}/\text{MMSCF}$$

5. CALCULATE SO<sub>2</sub> EMISSION FACTOR:

$$\frac{21.5 \text{ Fe}^3_{\text{SO}_2}}{\text{MMSCF}_{\text{LFG}}} \times \frac{0.173 \text{ }^{\#}\text{SO}_2}{\text{Fe}^3_{\text{SO}_2}} = 3.72 \text{ }^{\#}/\text{MMSCF}$$

6. CALCULATE CO EMISSION FACTOR:

$$\frac{0.25 \text{ }^{\#}}{\text{HR}} \times \frac{8,760 \text{ HR}}{\text{YR}} \times \frac{\text{YR}}{709.56 \text{ MMSCF}} = 3.09 \text{ }^{\#}/\text{MMSCF}$$

7. CALCULATE PARTICULATE MATTER EMISSION FACTOR:

$$\frac{1.3 \text{ }^{\#}}{\text{HR}} \times \frac{8,760 \text{ HR}}{\text{YR}} \times \frac{\text{YR}}{709.56 \text{ MMSCF}} = 16.05 \text{ }^{\#}/\text{MMSCF}$$

# GAS CONTROL ENGINEERING, INC.

By KH Date 2/16/94 Subject FLOW CALCULATIONS Sheet No. 4 of 4

Chkd. By R Prosser Date 2/16/94 Proj. No. 1003-1

## PURPOSE -

THE PURPOSE OF THESE CALCULATIONS IS TO OBTAIN AN AVERAGE ANNUAL FLOW OF LANDFILL GAS BASED ON FIELD DATA

## DATA

THE DATA USED IN THESE CALCULATIONS WAS SUPPLIED BY THE FIELD TECHNICIAN (SCS FIELD SERVICES). A COPY OF THE LOG SHEET IS ATTACHED

DATE	PRESSURE (IN. WC)	TEMP (°F)	(1) FLOW		(2)
			ACFM	SCFM	
3/10/93	15.8	100	910	936	
6/25/93	11.8	100	1100	1051	
9/21/93	14	100	1145	1100	
12/21/93	10.5	100	1100	1048	

$$\begin{aligned}\text{AVERAGE ANNUAL FLOW} &= (936 + 1051 + 1100 + 1048) / 4 \\ &= 1034 \text{ SCFM} \\ &= 543.47 \text{ MMSCF/YR.}\end{aligned}$$

(1) TEMP. DATA WAS NOT AVAILABLE - 100°F WAS THE ASSUMED GAS TEMP.

$$(2) \text{ SCFM} = \frac{520}{T + 460} \times \frac{14.7 + \frac{P}{2.77}}{14.7} \times \text{ACFM}$$

T = GAS TEMP (°F)

P = GAS PRESSURE (IN. W.C.)

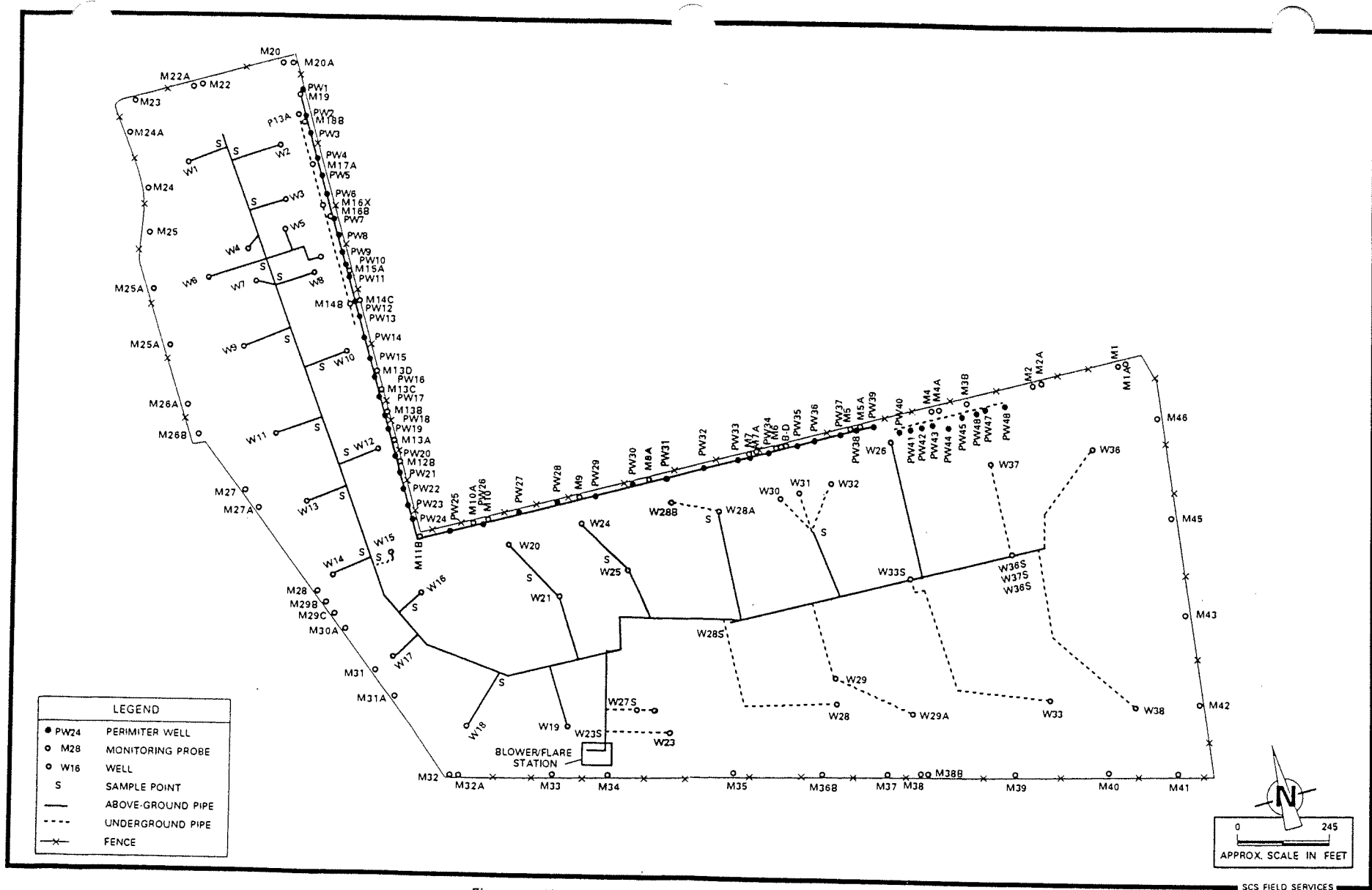


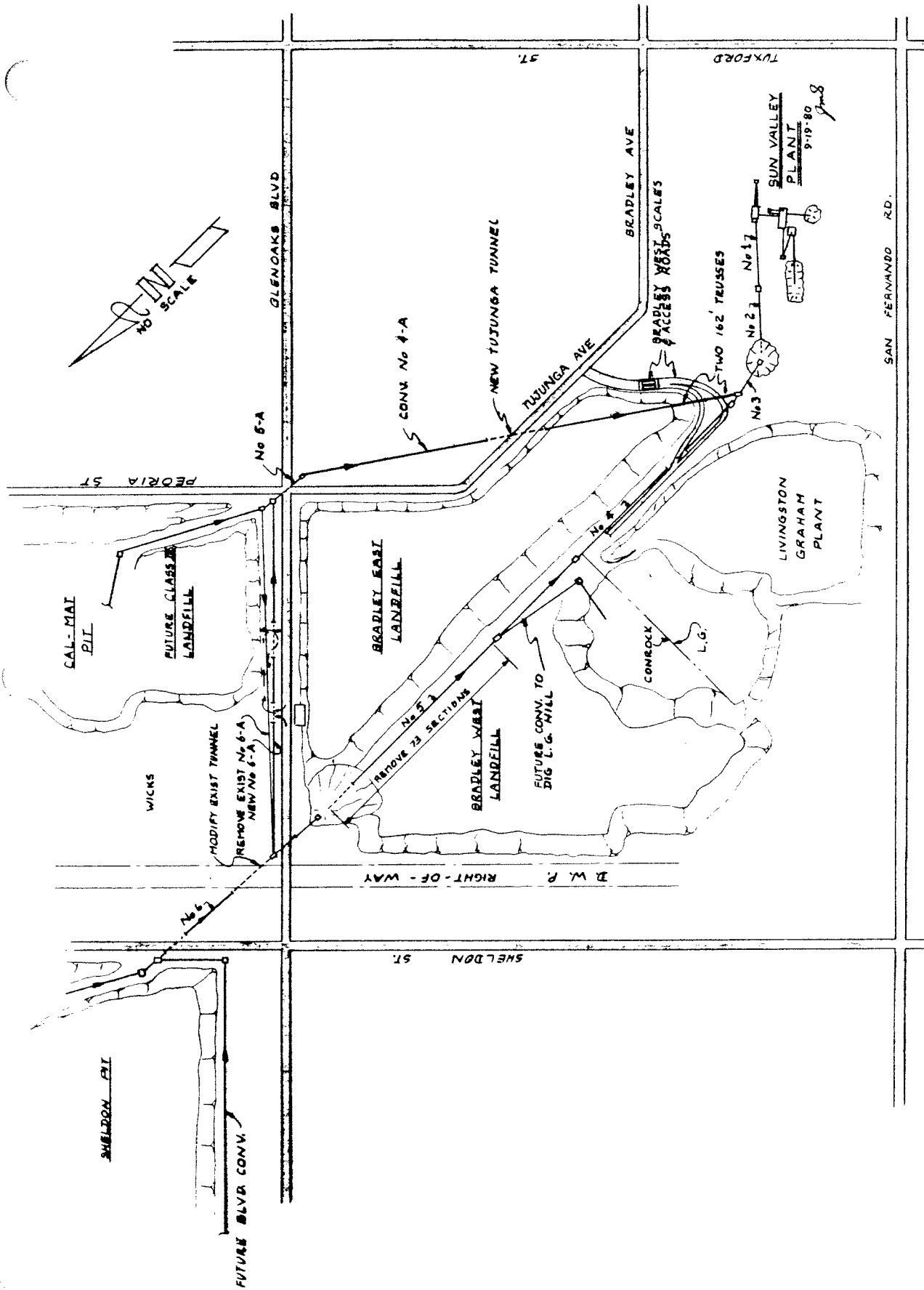
Figure 1. Hewitt North Hollywood/Probes and Well Field.

TABLE 3  
HEWITT PIT. Flare Station Data

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
06/02/98	23.6	3.2	-37.3	11.0	670	1550	2337
06/09/98	23.4	4.2	-36.5	10.6	671	1537	2172
06/16/98	23.6	2.8	-36.2	10.5	670	1551	2406
06/23/98	25.7	2.6	-36.5	11.2	678	1550	2309
06/30/98	23.1	3.9	-35.0	11.1	650	1550	1964
=====	=====	=====	=====	=====	=====	=====	=====
Total:							11188
Minimum:						1537	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column



PERMITTED  
EMISSIONS SUMMARY

93  
South Coast  
AIR QUALITY MANAGEMENT DISTRICT

PLEASE PRINT YOUR UPPER-CASE LETTERS  
AND NUMBERS NEATLY LIKE THIS:

A B C D E 1 2 3 4 5

(See reverse side for Instructions.)

COMPANY NAME

CALMAT PROPERTIES

FACILITY I.D. NUMBER

0 0 3 5 3 0

	ORGANIC GASES (tons/year) (a)	METHANE (tons/year) (b)	SPECIFIC ORGANICS (tons/year) (c)	NITROGEN OXIDES (tons/year) (d)	SULFUR OXIDES (tons/year) (e)	CARBON MONOXIDE (tons/year) (f)	PARTICULATE MATTER (tons/year) (g)
1. FORM B1	, 0 . 1	, 1 . 0		, 1 . 9	, 1 . 0	, 0 . 8	, 4 . 4
2. FORM B2	, .	, .		, .	, .	, .	, .
3. FORM B3	, .		, .				
4. FORM B4	, .	, .	, .	, .	, .	, .	, .
5. FORM E1 or R1	, .	, .		, .	, .	, .	, .
6. Total Emissions (Add Lines 1 through 5).	, 0 . 1	, 1 . 0	, .	, 1 . 9	, 1 . 0	, 0 . 8	, 4 . 4

\* See Note.

\* Note: 1. If any total on Line 6 is equal to or greater than 4.0 tons, round to the nearest ton and transfer to FORM S, Line 1.

Totals equal to or less than 3.9 tons, are NOT to be transferred to FORM S.

2. Transfer all totals to FORM CU, Line 6.

S.C.A.Q.M.D. reserves the right to audit the reported emissions. All records and calculations used in completing this summary must be retained for a minimum of two years.



## EMISSIONS FROM FUEL BURNING IN BOILERS, OVENS, FURNACES &amp; HEATERS

South Coast  
AIR QUALITY MANAGEMENT DISTRICT

93

PLEASE PRINT YOUR UPPER-CASE LETTERS  
AND NUMBERS NEATLY LIKE THIS:

A B C D E 1 2 3 4 5

(See reverse side for Instructions)

COMPANY NAME

CALMAT PROPERTIES

FACILITY I.D. NUMBER

0 0 3 5 3 0

FUEL (a)	ANNUAL USAGE (b)	ORGANIC GASES (c)	METHANE (d)	NITROGEN OXIDES (e)	SULFUR OXIDES (f)	CARBON MONOXIDE (g)	PARTICULATE MATTER (h)
NATURAL GAS *	0, 0 0 0. 0 0	.	.	.	.	.	.
		-0-		-0-	-0-	-0-	-0-
LPG, PROPANE, & BUTANE	0, 0 0 0. 0 1	.	.	.	.	.	.
		-0-	-0-	-0-	-0-	-0-	-0-
DISTILLATE ** (0.05% or 0.5% S)	0, 0 0 0. 0 0	.	.	.	.	.	.
		-0-	-0-	-0-	-0-	-0-	-0-
RESIDUAL ** (0.25% or 0.5% S)	0, 0 0 0. 0 0	.	.	.	.	.	.
		-0-	-0-	-0-	-0-	-0-	-0-
LANDFILL / DIGESTER GAS	, 5 4 3 .4 7	0. 43	3. 82	7 .04	3 .7 2	, 3 .09	1 6 .0 5
		234	2076	3826	2022	1679	8723
1. TOTAL EMISSIONS (lbs/yr)		234	2076	3826	2022	1679	8723
2. Divide Line 1 by 2000 then transfer to FORM C, Line 1 (tons/yr).		0.12	1.04	1.91	1.01	0.84	4.36

\* See back of form for NO<sub>x</sub> Emission Factor.\*\* See back of form for SO<sub>x</sub> Emission Factor.S.C.A.Q.M.D. reserves the right to audit the reported emissions. All records and calculations  
used in completing this summary must be retained for a minimum of two years.

## FEES SUMMARY

(THIS FORM SHOULD BE THE TOP PAGE OF YOUR RETURN PACKAGE)

993

South Coast  
AIR QUALITY MANAGEMENT DISTRICTPLEASE PRINT YOUR UPPER-CASE LETTERS  
AND NUMBERS NEATLY LIKE THIS:

A B C D E 1 2 3 4 5

(See reverse side for Instructions.)

COMPANY NAME

CALMAT PROPERTIES CO.

FACILITY I.D. NUMBER

0 0 3 5 3 0

Submittal Date: March 04, 1994

	ORGANIC GASES (a)	NO FEE FOR METHANE (b)	SPECIFIC ORGANICS (c)	NITROGEN OXIDES (d)	SULFUR OXIDES (e)	CARBON MONOXIDE (f)	PARTICULATE MATTER (g)
1. Total Emissions from FORM C, Line 6.	,		,	,	,	,	, 4
2. Emission Fee Due per Pollutant from Appendix F.	,		,	,	,	,	, 2 0 5
3. Total Emission Fees for all pollutants (Add all fees on Line 2) [a + c + d + e + f + g].					,	, 2 0 5 .	
4. Toxic Air Contaminants/Ozone Depleter Fees.					,	.	
5. TOTAL FEES DUE (Add Lines 3 & 4).					,	, 2 0 5 . 0 0	
6. LATE FEE (If any).					,	.	
7. TOTAL AMOUNT PAID.					,	, 2 0 5 . 0 0	

ATTACH CHECK HERE

For District use only

**SCS FIELD SERVICES, INC.**

January 19, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your January 1995 Inspection Report, enclosed is the December 1997 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, all monitoring wells tested exhibited no methane gas.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	12/02/97	ND	20.5	-0.02
1A	12/02/97	ND	19.1	-0.01
2	12/02/97	ND	20.4	-0.02
2A	12/02/97	ND	20.4	-0.02
3B	12/02/97	ND	18.0	-0.02
4	12/02/97	ND	20.4	ND
4A	12/02/97	ND	20.4	-0.02
5	12/02/97	ND	20.4	-0.12
5A	12/02/97	ND	20.3	ND
6B	12/02/97	ND	18.7	-0.17
6C	12/02/97	ND	18.7	ND
6D	12/02/97	ND	19.8	-0.07
7	12/02/97	ND	20.5	ND
7A	12/02/97	ND	20.4	ND
8A	12/02/97	ND	20.2	-0.04
9	12/02/97	ND	20.4	-0.15
10	12/02/97	ND	20.3	ND
11B	12/02/97	ND	20.4	-0.10
12B	12/02/97	ND	20.5	-0.06
13B	12/02/97	ND	20.5	-0.06
13D	12/02/97	ND	20.4	-0.06
13C	12/02/97	ND	20.4	-0.05
13X	12/02/97	ND	20.5	-0.01
14B	12/02/97	ND	20.5	-1.90
14C	12/02/97	ND	20.4	ND
15A	12/02/97	ND	20.2	-1.80

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
16A	12/02/97	ND	15.0	-0.12
16X	12/02/97	ND	19.7	-0.01
17A	12/02/97	ND	15.4	-0.06
18B	12/02/97	ND	16.7	-0.03
19	12/02/97	ND	19.3	ND
20	12/02/97	ND	19.0	ND
20A	12/02/97	ND	18.4	-0.04
22	12/02/97	ND	19.7	-0.01
22A	12/02/97	ND	20.2	-0.06
23	12/02/97	ND	20.3	0.09
24	12/02/97	ND	20.4	-0.02
24A	12/02/97	ND	20.4	-0.03
25	12/02/97	ND	20.4	-0.06
25A	12/02/97	ND	20.3	-0.03
26	12/02/97	ND	20.4	-0.02
26A	12/02/97	ND	20.3	-0.04
26B	12/02/97	ND	20.1	ND
27	12/02/97	ND	20.0	ND
27A	12/02/97	ND	19.5	-0.02
28	12/02/97	ND	19.9	ND
30A	12/02/97	ND	20.0	0.18
31	12/02/97	ND	20.5	0.39
31A	12/02/97	ND	20.4	ND
32	12/02/97	ND	20.4	ND
32A	12/02/97	ND	20.4	0.01
33	12/02/97	ND	20.4	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
34	12/02/97	ND	19.4	ND
35	12/02/97	ND	20.4	-0.01
36B	12/02/97	ND	20.3	-0.01
37	12/02/97	ND	20.5	ND
38	12/02/97	ND	20.4	-0.05
39	12/02/97	NT	NT	NT
40	12/02/97	ND	20.4	0.01
41	12/02/97	ND	19.7	ND
42	12/02/97	ND	20.4	0.01
43	12/02/97	ND	20.4	-0.04
45	12/02/97	ND	20.5	-0.08
46	12/02/97	ND	20.4	ND
1B'	12/02/97	ND	20.5	-0.12
1C'	12/02/97	ND	18.8	-0.06
2B'	12/02/97	ND	20.5	-0.05
2C'	12/02/97	ND	20.5	-0.07
3B'	12/02/97	ND	20.4	-0.03
3C'	12/02/97	ND	19.0	-0.10
4B'	12/02/97	ND	20.4	-0.12
4C'	12/02/97	ND	20.3	-0.09
5B'	12/02/97	ND	20.4	-0.20
5C'	12/02/97	ND	20.4	-0.13
6B'	12/02/97	ND	20.5	-0.05
6C'	12/02/97	ND	20.4	-0.04
7B'	12/02/97	ND	20.4	-0.03
7C'	12/02/97	ND	17.3	-0.02

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
8B'	12/02/97	ND	20.4	-0.05
8C'	12/02/97	ND	20.3	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

Shaunna

4014 Long Beach Blvd., Third Floor  
Long Beach, CA 90807

562 492-6222  
FAX 562 492-6210



**SCS FIELD SERVICES, INC.**

17 ~~December 15~~, 1997  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

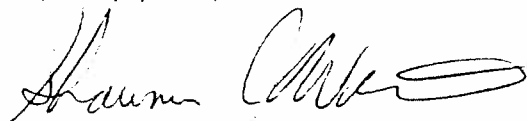
Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

~~December~~  
In accordance with the request made in your January 1995 Inspection Report, enclosed is the ~~November~~ 1997 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, all monitoring wells tested exhibited no methane gas.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	11/04/97	ND	20.4	ND
1A	11/04/97	ND	19.7	ND
2	11/04/97	ND	20.4	ND
2A	11/04/97	ND	20.4	ND
3B	11/04/97	ND	18.5	ND
4	11/04/97	ND	20.1	0.06
4A	11/04/97	ND	20.4	ND
5	11/04/97	ND	20.6	-0.01
5A	11/04/97	ND	20.6	0.36
6B	11/04/97	ND	19.9	-0.05
6C	11/04/97	ND	18.6	-0.03
6D	11/04/97	ND	19.2	-0.02
7	11/04/97	ND	20.6	0.12
7A	11/04/97	ND	20.6	ND
8A	11/04/97	ND	19.7	-0.01
9	11/04/97	ND	20.7	-0.05
10	11/04/97	ND	20.6	-0.02
10A	11/04/97	ND	20.7	-0.02
11B	11/04/97	ND	20.6	ND
12B	11/04/97	ND	20.6	ND
13B	11/04/97	ND	20.6	ND
13D	11/04/97	ND	20.6	-0.01
13C	11/04/97	ND	20.4	ND
13X	11/04/97	ND	20.7	ND
14B	11/04/97	ND	20.6	1.14
14C	11/04/97	ND	20.5	ND

ND=None Detected

NT=Not Taken

%vol=Percent by Volume

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	11/04/97	ND	20.6	5.6
16A	11/04/97	ND	16.3	-0.06
16X	11/04/97	ND	20.4	ND
17A	11/04/97	ND	17.1	-0.05
18B	11/04/97	ND	15.3	-0.02
19	11/04/97	ND	19.5	0.02
20	11/04/97	ND	19.5	ND
20A	11/04/97	ND	18.9	-0.02
22	11/04/97	ND	20.2	-0.02
22A	11/04/97	ND	20.3	-0.04
23	11/04/97	ND	20.1	0.23
24	11/04/97	ND	20.6	-0.02
24A	11/04/97	ND	20.6	ND
25	11/04/97	ND	20.7	ND
25A	11/04/97	ND	20.5	ND
26	11/04/97	ND	20.6	-0.01
26A	11/04/97	ND	20.6	-0.01
26B	11/04/97	ND	20.6	ND
27	11/04/97	ND	20.4	ND
27A	11/04/97	ND	19.7	ND
28	11/04/97	ND	20.6	ND
30A	11/04/97	ND	20.4	0.74
31	11/04/97	ND	20.6	1.36
31A	11/04/97	ND	20.6	0.25
32	11/04/97	ND	20.5	ND
32A	11/04/97	ND	20.6	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
34	12/02/97	ND	19.4	ND
35	12/02/97	ND	20.4	-0.01
36B	12/02/97	ND	20.3	-0.01
37	12/02/97	ND	20.5	ND
38	12/02/97	ND	20.4	-0.05
39	12/02/97	NT	NT	NT
40	12/02/97	ND	20.4	0.01
41	12/02/97	ND	19.7	ND
42	12/02/97	ND	20.4	0.01
43	12/02/97	ND	20.4	-0.04
45	12/02/97	ND	20.5	-0.08
46	12/02/97	ND	20.4	ND
1B'	12/02/97	ND	20.5	-0.12
1C'	12/02/97	ND	18.8	-0.06
2B'	12/02/97	ND	20.5	-0.05
2C'	12/02/97	ND	20.5	-0.07
3B'	12/02/97	ND	20.4	-0.03
3C'	12/02/97	ND	19.0	-0.10
4B'	12/02/97	ND	20.4	-0.12
4C'	12/02/97	ND	20.3	-0.09
5B'	12/02/97	ND	20.4	-0.20
5C'	12/02/97	ND	20.4	-0.13
6B'	12/02/97	ND	20.5	-0.05
6C'	12/02/97	ND	20.4	-0.04
7B'	12/02/97	ND	20.4	-0.03
7C'	12/02/97	ND	17.3	-0.02

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
8B'	12/02/97	ND	20.4	-0.05
8C'	12/02/97	ND	20.3	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
33	11/04/97	ND	20.5	0.01
34	11/04/97	ND	20.4	0.01
35	11/04/97	ND	20.7	ND
36B	11/04/97	ND	18.8	0.02
37	11/04/97	ND	20.6	ND
38	11/04/97	ND	20.5	ND
39	11/04/97	ND	20.3	1.01
40	11/04/97	ND	20.4	ND
41	11/04/97	ND	20.4	ND
42	11/04/97	ND	20.3	ND
43	11/04/97	ND	20.1	-0.02
45	11/04/97	ND	20.0	-0.04
46	11/04/97	ND	20.3	ND
1B'	11/04/97	ND	20.5	-0.02
1C'	11/04/97	ND	20.2	-0.01
2B'	11/04/97	ND	20.1	ND
2C'	11/04/97	ND	19.9	-0.01
3B'	11/04/97	ND	20.5	ND
3C'	11/04/97	ND	20.6	ND
4B'	11/04/97	ND	20.2	-0.02
4C'	11/04/97	ND	20.6	ND
5B'	11/04/97	ND	19.9	-0.06
5C'	11/04/97	ND	20.6	-0.04
6B'	11/04/97	ND	19.4	-0.03
6C'	11/04/97	ND	20.6	-0.02
7B'	11/04/97	ND	18.5	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	11/04/97	ND	20.6	ND
8B'	11/04/97	ND	20.6	ND
8C'	11/04/97	ND	20.5	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	12/02/97	ND	20.5	-0.02
1A	12/02/97	ND	19.1	-0.01
2	12/02/97	ND	20.4	-0.02
2A	12/02/97	ND	20.4	-0.02
3B	12/02/97	ND	18.0	-0.02
4	12/02/97	ND	20.4	ND
4A	12/02/97	ND	20.4	-0.02
5	12/02/97	ND	20.4	-0.12
5A	12/02/97	ND	20.3	ND
6B	12/02/97	ND	18.7	-0.17
6C	12/02/97	ND	18.7	ND
6D	12/02/97	ND	19.8	-0.07
7	12/02/97	ND	20.5	ND
7A	12/02/97	ND	20.4	ND
8A	12/02/97	ND	20.2	-0.04
9	12/02/97	ND	20.4	-0.15
10	12/02/97	ND	20.3	ND
11B	12/02/97	ND	20.4	-0.10
12B	12/02/97	ND	20.5	-0.06
13B	12/02/97	ND	20.5	-0.06
13D	12/02/97	ND	20.4	-0.06
13C	12/02/97	ND	20.4	-0.05
13X	12/02/97	ND	20.5	-0.01
14B	12/02/97	ND	20.5	-1.90
14C	12/02/97	ND	20.4	ND
15A	12/02/97	ND	20.2	-1.80

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
16A	12/02/97	ND	15.0	-0.12
16X	12/02/97	ND	19.7	-0.01
17A	12/02/97	ND	15.4	-0.06
18B	12/02/97	ND	16.7	-0.03
19	12/02/97	ND	19.3	ND
20	12/02/97	ND	19.0	ND
20A	12/02/97	ND	18.4	-0.04
22	12/02/97	ND	19.7	-0.01
22A	12/02/97	ND	20.2	-0.06
23	12/02/97	ND	20.3	0.09
24	12/02/97	ND	20.4	-0.02
24A	12/02/97	ND	20.4	-0.03
25	12/02/97	ND	20.4	-0.06
25A	12/02/97	ND	20.3	-0.03
26	12/02/97	ND	20.4	-0.02
26A	12/02/97	ND	20.3	-0.04
26B	12/02/97	ND	20.1	ND
27	12/02/97	ND	20.0	ND
27A	12/02/97	ND	19.5	-0.02
28	12/02/97	ND	19.9	ND
30A	12/02/97	ND	20.0	0.18
31	12/02/97	ND	20.5	0.39
31A	12/02/97	ND	20.4	ND
32	12/02/97	ND	20.4	ND
32A	12/02/97	ND	20.4	0.01
33	12/02/97	ND	20.4	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

February 18, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your January 1995 Inspection Report, enclosed is the January 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, all monitoring wells tested exhibited no methane gas.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	01/06/98	ND	18.9	-0.04
1A	01/06/98	ND	19.1	-0.03
2	01/06/98	ND	20.7	ND
2A	01/06/98	ND	20.4	-0.01
3B	01/06/98	ND	20.3	-0.01
4	01/06/98	ND	20.5	-0.03
4A	01/06/98	ND	19.8	-0.04
5	01/06/98	ND	20.7	-0.19
5A	01/06/98	ND	20.5	0.05
6B	01/06/98	ND	19.8	-0.29
6C	01/06/98	ND	19.4	-0.02
6D	01/06/98	ND	20.5	0.15
7	01/06/98	ND	20.9	0.15
7A	01/06/98	ND	20.4	-0.08
8A	01/06/98	ND	17.9	-0.07
9	01/06/98	ND	19.5	-0.16
10	01/06/98	ND	18.3	-0.12
10A	01/06/98	ND	20.7	-0.04
11B	01/06/98	ND	20.8	-0.15
12B	01/06/98	ND	20.3	-0.14
13B	01/06/98	ND	20.8	-0.08
13D	01/06/98	ND	18.3	-0.08
13C	01/06/98	ND	19.3	-0.10
13X	01/06/98	ND	20.8	ND
14B	01/06/98	ND	20.9	1.60
14C	01/06/98	ND	19.6	-0.04

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	01/06/98	ND	20.9	0.74
16A	01/06/98	ND	15.9	-0.12
16X	01/06/98	ND	20.0	ND
17A	01/06/98	ND	16.4	-0.06
18B	01/06/98	ND	13.3	-0.04
19	01/06/98	ND	19.9	-0.01
20	01/06/98	ND	19.7	-0.02
20A	01/06/98	ND	18.9	-0.02
22	01/06/98	ND	19.6	-0.01
22A	01/06/98	ND	19.5	-0.02
23	01/06/98	ND	20.1	0.03
24	01/06/98	ND	19.6	-0.02
24A	01/06/98	ND	19.5	-0.04
25	01/06/98	ND	20.7	-0.01
25A	01/06/98	ND	18.9	-0.02
26	01/06/98	ND	20.7	-0.03
26A	01/06/98	ND	20.8	-0.05
26B	01/06/98	ND	20.3	ND
27	01/06/98	ND	19.6	0.01
27A	01/06/98	ND	17.7	-0.06
28	01/06/98	ND	20.8	ND
30A	01/06/98	ND	19.9	ND
31	01/06/98	ND	20.8	0.31
31A	01/06/98	ND	20.4	ND
32	01/06/98	ND	20.8	0.01
32A	01/06/98	ND	20.7	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
-----	-----	-----	-----	-----
33	01/06/98	ND	20.3	ND
34	01/06/98	ND	15.3	ND
35	01/06/98	ND	20.8	ND
36B	01/06/98	ND	20.2	ND
37	01/06/98	ND	20.7	-0.03
38	01/06/98	ND	20.7	-0.02
39	01/06/98	ND	20.8	0.01
40	01/06/98	ND	20.3	ND
41	01/06/98	ND	20.8	ND
42	01/06/98	ND	20.5	-0.01
43	01/06/98	ND	13.5	-0.04
45	01/06/98	ND	20.6	-0.07
46	01/06/98	ND	20.8	ND
1B'	01/06/98	ND	20.5	-0.07
1C'	01/06/98	ND	19.2	-0.08
2B'	01/06/98	ND	20.9	-0.07
2C'	01/06/98	ND	20.8	-0.07
3B'	01/06/98	ND	20.4	-0.07
3C'	01/06/98	ND	20.8	-0.07
4B'	01/06/98	ND	19.9	-0.05
4C'	01/06/98	ND	20.8	-0.07
5B'	01/06/98	ND	20.7	-0.03
5C'	01/06/98	ND	20.7	-0.10
6B'	01/06/98	ND	20.6	-0.04
6C'	01/06/98	ND	20.8	-0.04
7B'	01/06/98	ND	18.6	-0.02

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	01/06/98	ND	20.1	-0.02
8B'	01/06/98	ND	20.8	-0.10
8C'	01/06/98	ND	20.7	-0.01

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

March 13, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the January 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, all monitoring wells tested exhibited no methane gas.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	02/03/98	ND	18.9	0.08
1A	02/03/98	ND	18.1	0.09
2	02/03/98	ND	14.5	0.01
2A	02/03/98	ND	16.8	0.03
3B	02/03/98	ND	18.9	0.01
4	02/03/98	ND	19.0	0.02
4A	02/03/98	ND	18.1	0.06
5	02/03/98	ND	8.0	0.17
5A	02/03/98	ND	19.4	0.08
6B	02/03/98	ND	17.9	0.28
6C	02/03/98	ND	17.7	0.04
6D	02/03/98	ND	18.0	0.08
7	02/03/98	ND	19.2	1.29
7A	02/03/98	ND	19.8	0.01
8A	02/03/98	ND	18.1	0.07
9	02/03/98	ND	19.7	-0.02
10	02/03/98	ND	19.5	0.09
10A	02/03/98	ND	19.6	0.03
11B	02/03/98	11.6	0.7	0.06
12B	02/03/98	ND	19.9	0.03
13B	02/03/98	ND	18.8	0.12
13D	02/03/98	ND	17.2	0.10
13C	02/03/98	ND	18.2	0.09
13X	02/03/98	ND	19.1	0.02
14B	02/03/98	ND	19.8	0.14
14C	02/03/98	ND	18.9	-0.01

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	02/03/98	ND	19.8	3.42
16A	02/03/98	ND	6.3	0.06
16X	02/03/98	ND	16.9	0.03
17A	02/03/98	ND	8.3	0.12
18B	02/03/98	ND	9.7	0.06
19	02/03/98	ND	14.3	0.03
20	02/03/98	ND	17.6	0.04
20A	02/03/98	ND	17.8	0.08
22	02/03/98	ND	17.5	0.28
22A	02/03/98	ND	18.3	0.03
23	02/03/98	ND	19.4	-1.4
24	02/03/98	ND	14.3	0.09
24A	02/03/98	ND	14.2	0.08
25	02/03/98	ND	16.8	0.06
25A	02/03/98	ND	17.3	0.14
26	02/03/98	ND	17.4	0.07
26A	02/03/98	ND	18.2	0.10
26B	02/03/98	ND	17.7	0.12
27	02/03/98	ND	18.4	ND
27A	02/03/98	ND	17.7	0.07
28	02/03/98	ND	18.5	0.01
30A	02/03/98	ND	19.4	0.71
31	02/03/98	ND	19.4	3.8
31A	02/03/98	ND	19.1	0.90
32	02/03/98	ND	18.7	0.06
32A	02/03/98	ND	16.7	0.06

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
33	02/03/98	ND	12.3	0.01
34	02/03/98	ND	14.7	0.20
35	02/03/98	ND	18.4	0.01
36B	02/03/98	ND	17.2	-0.04
37	02/03/98	ND	17.7	0.10
38	02/03/98	ND	6.2	0.60
39	02/03/98	ND	19.6	1.6
40	02/03/98	ND	19.6	0.03
41	02/03/98	ND	16.7	0.05
42	02/03/98	ND	17.7	0.10
43	02/03/98	ND	9.9	0.23
45	02/03/98	ND	18.9	0.26
46	02/03/98	ND	19.7	0.14
1B'	02/03/98	ND	19.8	0.18
1C'	02/03/98	ND	18.3	0.11
2B'	02/03/98	ND	17.4	0.08
2C'	02/03/98	ND	13.3	0.08
3B'	02/03/98	ND	17.9	0.05
3C'	02/03/98	ND	11.8	0.16
4B'	02/03/98	ND	18.4	0.14
4C'	02/03/98	ND	8.2	0.08
5B'	02/03/98	ND	19.0	0.22
5C'	02/03/98	ND	18.9	0.10
6B'	02/03/98	ND	15.1	0.12
6C'	02/03/98	ND	6.0	0.10
7B'	02/03/98	ND	13.3	0.03

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	02/03/98	ND	13.3	0.04
8B'	02/03/98	ND	15.9	0.02
8C'	02/03/98	ND	19.2	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

April 6, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the March 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, all monitoring wells tested exhibited no methane gas.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	03/03/98	ND	20.6	0.01
1A	03/03/98	ND	18.8	0.05
2	03/03/98	ND	19.7	0.03
2A	03/03/98	ND	18.1	0.02
3B	03/03/98	ND	19.1	0.02
4	03/03/98	ND	20.2	0.17
4A	03/03/98	ND	20.4	0.06
5	03/03/98	ND	20.1	0.10
5A	03/03/98	ND	15.6	0.21
6B	03/03/98	ND	18.7	0.26
6C	03/03/98	ND	18.9	0.02
6D	03/03/98	ND	18.8	0.14
7	03/03/98	ND	20.1	0.01
7A	03/03/98	ND	20.1	0.02
8A	03/03/98	ND	19.1	0.10
9	03/03/98	ND	20.2	0.05
10	03/03/98	ND	19.9	0.09
10A	03/03/98	ND	20.3	0.06
11B	03/03/98	ND	20.4	0.03
12B	03/03/98	ND	20.3	0.01
13B	03/03/98	ND	20.2	0.04
13D	03/03/98	ND	20.1	0.04
13C	03/03/98	ND	17.0	0.02
13X	03/03/98	ND	19.7	0.02
14B	03/03/98	ND	20.3	0.04
14C	03/03/98	ND	19.4	0.02

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	03/03/98	ND	20.4	0.06
16A	03/03/98	ND	7.2	0.04
16X	03/03/98	ND	20.2	0.01
17A	03/03/98	ND	13.3	0.08
18B	03/03/98	ND	6.2	0.03
19	03/03/98	ND	16.6	0.02
20	03/03/98	ND	18.0	0.04
20A	03/03/98	ND	18.8	0.06
22	03/03/98	ND	16.9	0.03
22A	03/03/98	ND	18.0	0.08
23	03/03/98	ND	19.9	0.14
24	03/03/98	ND	13.7	0.06
24A	03/03/98	ND	17.8	0.06
25	03/03/98	ND	17.5	0.04
25A	03/03/98	ND	17.8	0.08
26	03/03/98	ND	18.4	0.05
26A	03/03/98	ND	19.4	0.05
26B	03/03/98	ND	19.0	0.04
27	03/03/98	ND	17.4	0.02
27A	03/03/98	ND	18.8	0.04
28	03/03/98	ND	18.7	ND
30A	03/03/98	ND	20.6	0.43
31	03/03/98	ND	20.6	0.29
31A	03/03/98	ND	19.8	0.53
32	03/03/98	ND	20.5	0.02
32A	03/03/98	ND	19.9	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
33	03/03/98	NO	19.2	NO
34	03/03/98	NO	17.6	NO
35	03/03/98	NO	19.8	NO
36B	03/03/98	NO	14.9	0.03
37	03/03/98	NO	18.6	0.01
38	03/03/98	NO	19.8	0.18
39	03/03/98	NO	20.2	1.20
40	03/03/98	NO	20.4	0.01
41	03/03/98	NO	20.2	0.04
42	03/03/98	NO	19.1	0.01
43	03/03/98	NO	14.2	0.08
45	03/03/98	NO	19.5	0.09
46	03/03/98	NO	19.3	NO
1B'	03/03/98	NO	20.1	0.08
1C'	03/03/98	NO	19.7	0.05
2B'	03/03/98	NO	19.6	0.06
2C'	03/03/98	NO	16.1	0.04
3B'	03/03/98	NO	18.0	0.01
3C'	03/03/98	NO	17.1	0.05
4B'	03/03/98	NO	20.4	0.10
4C'	03/03/98	NO	10.1	0.04
5B'	03/03/98	NO	18.0	0.11
5C'	03/03/98	NO	20.4	0.06
6B'	03/03/98	NO	16.3	0.05
6C'	03/03/98	NO	14.3	0.05
7B'	03/03/98	NO	13.3	0.02

NO=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	03/03/98	ND	14.1	0.02
8B'	03/03/98	ND	17.2	0.10
8C'	03/03/98	ND	16.0	0.04

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

May 27, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

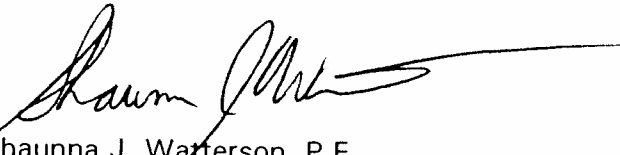
Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the April 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, all monitoring wells tested exhibited no methane gas.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	04/14/98	NO	20.4	NO
1A	04/14/98	NO	16.1	ND
2	04/14/98	NO	19.4	NO
2A	04/14/98	NO	19.7	NO
3B	04/14/98	NO	20.4	0.02
4	04/14/98	NO	20.0	NO
4A	04/14/98	NO	18.4	0.01
5	04/14/98	NO	20.4	-0.08
5A	04/14/98	NO	20.1	0.04
6B	04/14/98	NO	18.3	-0.04
6C	04/14/98	NO	17.8	NO
6D	04/14/98	NO	19.1	-0.04
7	04/14/98	NO	20.6	0.02
7A	04/14/98	NO	20.2	NO
8A	04/14/98	NO	17.9	-0.04
9	04/14/98	ND	20.6	-0.08
10	04/14/98	NO	19.8	-0.04
10A	04/14/98	NO	20.2	NO
11B	04/14/98	NO	20.6	-0.04
12B	04/14/98	NO	20.4	-0.02
13B	04/14/98	ND	20.5	-0.02
13D	04/14/98	NO	20.4	-0.03
13C	04/14/98	NO	20.3	-0.01
13X	04/14/98	NO	20.6	NO
14B	04/14/98	NO	20.6	0.04
15A	04/14/98	NO	20.6	0.03

NO=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
16A	04/14/98	ND	20.4	ND
16X	04/14/98	ND	20.4	ND
17A	04/14/98	ND	10.1	ND
18B	04/14/98	ND	20.4	-0.02
19	04/14/98	ND	19.6	-0.01
20	04/14/98	ND	17.9	0.02
20A	04/14/98	ND	20.1	0.02
22	04/14/98	ND	20.2	0.02
22A	04/14/98	ND	19.7	ND
23	04/14/98	ND	20.3	0.04
24	04/14/98	ND	20.2	-0.02
24A	04/14/98	ND	20.4	-0.02
25	04/14/98	ND	20.3	-0.01
25A	04/14/98	ND	20.5	-0.02
26	04/14/98	ND	20.4	-0.01
26A	04/14/98	ND	20.4	-0.02
27	04/14/98	ND	20.2	ND
27A	04/14/98	ND	19.6	ND
28	04/14/98	ND	20.6	-0.01
30A	04/14/98	ND	20.1	0.04
31	04/14/98	ND	20.6	0.06
31A	04/14/98	ND	18.2	0.72
32	04/14/98	ND	20.6	ND
32A	04/14/98	ND	20.6	ND
33	04/14/98	ND	19.6	ND
34	04/14/98	ND	16.3	-0.01

ND=None Detected  
 %-vol=Percent by Volume

NT=Not Taken  
 in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
35	04/14/98	ND	20.4	ND
36B	04/14/98	ND	19.1	ND
37	04/14/98	ND	20.4	ND
38	04/14/98	ND	18.2	-0.04
39	04/14/98	ND	20.4	0.04
40	04/14/98	ND	20.4	ND
41	04/14/98	ND	19.7	0.01
42	04/14/98	ND	19.7	-0.01
43	04/14/98	ND	12.2	-0.02
45	04/14/98	ND	20.3	-0.02
46	04/14/98	ND	20.2	0.02
1B'	04/14/98	ND	20.4	-0.02
1C'	04/14/98	ND	19.8	-0.01
2B'	04/14/98	ND	18.9	ND
2C'	04/14/98	ND	20.3	ND
3B'	04/14/98	ND	20.4	ND
3C'	04/14/98	ND	20.6	ND
4B'	04/14/98	ND	20.6	ND
4C'	04/14/98	ND	19.4	ND
5B'	04/14/98	ND	13.7	-0.01
5C'	04/14/98	ND	20.3	-0.01
6B'	04/14/98	ND	20.6	ND
6C'	04/14/98	ND	20.4	-0.01
7B'	04/14/98	ND	20.4	ND
7C'	04/14/98	ND	18.1	ND
8B'	04/14/98	ND	20.6	-0.02

ND=None Detected  
 %-vol=Percent by Volume

NT=Not Taken  
 in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
8C'	04/14/98	ND	20.6	-0.01

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

June 30, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the May 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, all monitoring wells tested exhibited methane gas well below the LEL or no methane gas was detected.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	05/05/98	ND	13.3	ND
1A	05/05/98	ND	14.1	ND
2	05/05/98	ND	17.0	ND
2A	05/05/98	ND	15.9	-0.01
3B	05/05/98	ND	15.1	ND
4	05/05/98	ND	20.0	ND
4A	05/05/98	ND	16.7	0.01
5	05/05/98	ND	17.9	ND
5A	05/05/98	ND	20.4	0.10
6B	05/05/98	ND	18.0	0.01
6C	05/05/98	ND	17.7	-0.01
6D	05/05/98	ND	19.2	-0.03
7	05/05/98	NT	NT	NT
7A	05/05/98	ND	20.1	ND
8A	05/05/98	ND	17.5	ND
9	05/05/98	0.2	18.3	-0.06
10	05/05/98	ND	18.6	-0.06
10A	05/05/98	ND	20.3	-0.04
11B	05/05/98	ND	20.8	-0.08
12B	05/05/98	ND	20.7	-0.07
13B	05/05/98	ND	19.4	-0.04
13D	05/05/98	ND	20.7	-0.03
13C	05/05/98	ND	20.2	-0.02
13X	05/05/98	ND	20.6	-0.01
14B	05/05/98	NT	NT	NT
14C	05/05/98	ND	15.3	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	05/05/98	NT	NT	NT
16A	05/05/98	ND	13.4	ND
16X	05/05/98	ND	19.5	-0.02
17A	05/05/98	ND	12.8	-0.02
18B	05/05/98	ND	14.3	-0.02
19	05/05/98	ND	19.0	0.01
20	05/05/98	ND	18.0	ND
20A	05/05/98	ND	17.3	ND
22	05/05/98	ND	20.1	ND
22A	05/05/98	ND	20.6	ND
23	05/05/98	ND	20.5	0.01
24	05/05/98	ND	19.3	-0.04
24A	05/05/98	ND	20.3	-0.01
25	05/05/98	ND	18.9	ND
25A	05/05/98	ND	19.0	-0.02
26	05/05/98	ND	19.8	-0.03
26A	05/05/98	ND	20.2	-0.03
26B	05/05/98	ND	19.9	0.01
27	05/05/98	ND	20.4	ND
27A	05/05/98	ND	20.8	ND
28	05/05/98	ND	20.6	ND
30A	05/05/98	ND	20.1	0.02
31	05/05/98	ND	19.6	0.04
31A	05/05/98	ND	20.1	0.01
32	05/05/98	ND	20.4	ND
32A	05/05/98	ND	20.7	-0.02

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	05/05/98	ND	17.3	-0.02
8B'	05/05/98	ND	16.5	ND
8C'	05/05/98	ND	18.7	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
Hewitt Pit Problem Probes

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
9	05/05/98	0.2	18.3	-0.06
	05/12/98	ND	18.9	-0.02
	05/19/98	ND	20.4	-0.02
	05/26/98	ND	20.8	-0.02

ND=None Detected

%-vol=Percent by Volume

NI=Not Taken

in-W.C.=Inches of Water Column

4014 Long Beach Blvd., Third Floor  
Long Beach, CA 90807562 492-6222  
FAX 562 492-6210**SCS FIELD SERVICES, INC.**July 1, 1998  
File No. 0789033.01

SENT VIA FAX 7/1/98

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065  
Fax (213) 258-3287Subject: Compliance with South Coast Air Quality Management District (AQMD)  
Rule 1150.1 for Inactive Landfills with Gas Collection Systems

Dear Mr. Cosby:

South Coast Air Quality Management District Rule 1150.1 (Rule 1150.1) was amended on April 10, 1998. Amended Rule 1150.1 now includes control of gaseous emissions from both active and inactive landfills. A landfill is considered inactive if it stopped receiving waste prior to November 8, 1987. There are different requirements for inactive sites depending on whether there is an existing landfill gas collection system already in-place or not. This letter is to address sites that do have gas control systems installed.

The following is a summary of items that the inactive landfill owner shall comply with after installation of a gas control system (these are the same as for active landfill sites):

1. Design, install and operate a wind speed and direction monitoring system with a continuous recorder.
2. On a monthly basis monitor and collect samples from subsurface refuse boundary-sampling probes. Any measurement of 5 percent Total Organic Compounds or greater by volume shall be recorded as an exceedance.
3. Collect monthly integrated surface samples. Any readings of 50 parts per million by volume (ppmv) or greater of TOC's shall be considered an exceedance.
4. Conduct instantaneous surface sampling each calendar quarter. Any reading of 500 ppmv or greater of TOC's is considered an exceedance.
5. On a monthly basis collect and analyze a gas sample from the main collection header line.
6. On a monthly basis collect and analyze ambient air samples (upwind and downwind).
7. Report results on a quarterly basis.



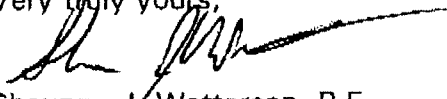
The compliance date for the amended Rule 1150.1 has been set at July 10, 1998. The following are three options to be in compliance with Rule 1150.1:

1. Comply with all of the requirements for inactive landfills with gas control systems as stated above.
2. Apply for an Alternative Compliance Plan by July 10, 1998. This could involve asking for reduced monitoring frequencies.
3. Apply for an Exemption to Rule 1150.1. This is considered a temporary exemption only. The site must be in compliance with probe, integrated and instantaneous monitoring, emit less than 55 tons per year of Non-Methane Organic Compounds, and constitute an insignificant health risk (through at least a screening level health risk assessment) to be considered by AQMD for the exemption.

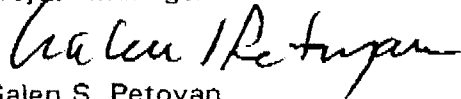
Based on conversations with AQMD personnel, unless you complete a formal variance, there is no way to get an extension past the July 10, 1998 compliance date. AQMD personnel suggest submitting at a minimum a skeleton Alternative Compliance Plan to meet the compliance date.

SCS-FS personnel are available to help prepare this alternative compliance plan. If you have any questions please call either of the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager



Galen S. Petoyan  
President  
SCS FIELD SERVICES, INC.

CC: Mark Beizer

**SCS ENGINEERS**

July 10, 1998  
File No. 0198092.00

South Coast Air Quality Management District  
21865 East Copley Drive  
Diamond Bar, California 91765  
Phone (909) 396-2000

**SUBJECT: ALTERNATIVE RULE 1150.1 COMPLIANCE PLAN FOR HEWITT PIT  
LANDFILL, NORTH HOLLYWOOD, CALIFORNIA, SCAQMD PERMIT No.  
D33194**

To Whom It May Concern:

This letter serves as an Alternative South Coast Air Quality Management District (SCAQMD) Rule 1150.1 (Rule) Compliance Plan for the former Hewitt Pit Sanitary Landfill, located at 7245 Laurel Canyon Boulevard in North Hollywood, California. This Alternative Compliance Plan (ACP) was prepared by SCS Engineers (SCS) on behalf of CalMat Properties Company, in response to the recently amended Rule 1150.1 (amended April 10, 1998). This letter is intended to fulfill the requirement for submittal of ACPs by July 10, 1998. As such, enclosed with this letter, please find SCAQMD Form 400-P, Application for Plans with the appropriate plan submittal and evaluation fees.

#### **FACILITY BACKGROUND**

The Hewitt Pit Landfill is an inactive, former organic refuse disposal facility which ceased receiving refuse in the 1970s. The landfill is equipped with a landfill gas (LFG) collection and control system, which consists of 82 extraction wells, an enclosed ground flare, and 81 monitoring probes. The current use of the landfill is auto salvage and storage. In addition to the LFG collection system, the surface of the landfill is paved with asphalt and dirt in order to minimize surface emission of LFG from the landfill. The location of the LFG extraction wells and monitoring probes are presented in Figure 1. Also attached for your reference, please find monitoring probe monitoring data collected at the site during the past calendar quarter.

Although the Hewitt Pit Landfill is currently an inactive landfill, the Rule includes a requirement that all inactive landfills with an LFG collection system meet all of the requirements for active landfills (Rule 1150.1, paragraph (h)(1)). However, the Rule also includes provisions for alterations to the requirements of the Rule based on site-specific conditions and certain exemption requirements (Rule 1150.1, subdivision (i)).

Subdivision (i) of the Rule states that approval of the ACP will be contingent upon the extent to which the plan provides equivalent levels of emissions control and enforceability, compared to the full requirements of the Rule. In accordance with subdivision (i), SCS and CalMat Properties Company have developed an ACP for the Hewitt Pit Landfill site based on the full requirements of Rule 1150.1, the site's existing SCAQMD Permits To Operate



requirements, monitoring/sampling requirements of other regulatory enforcement agencies, historic monitoring/sampling results, operating history of the existing gas collection system, and the current land use/cover on the landfill.

## **ALTERNATIVE COMPLIANCE PLAN**

### **Landfill Operation Requirements**

In accordance with subdivision (d) of the Rule, the Hewitt Pit Landfill currently maintains a valid Permit To Operate from the SCAQMD for both the LFG collection and control systems (SCAQMD Permit No. D33194). Under the ACP, the Hewitt Pit Landfill will maintain consistent compliance with the conditions of its current permit, and in general accordance with subdivision (d) of Rule 1150.1, except where noted below and in the following sections.

As required under the Permits To Operate, an initial source test of the enclosed flare was conducted at the landfill following initial start-up of the LFG control system. The Permits To Operate do not specify an annual source testing requirement for continued operation of the flare. SCS and the CalMat Properties Company feel that the Permits To Operate were specifically issued to reflect the operating conditions at the Hewitt Pit Landfill, and will provide an optimally protective level of emissions control. Therefore, annual source testing is not proposed to be a component of the site's ACP.

### **Sampling and Monitoring Requirements**

#### **Boundary Probe Monitoring**

As part of its ACP, the existing monitoring probes will be field monitored on a monthly basis for methane, oxygen, and pressure, using a Landfill Control Technologies GEM-500, Gas Extraction Monitor, or comparable instrument.

In general accordance with paragraph (e)(1), an action level of 5% methane in any of the monitoring points or probes will be recorded as a monitoring exceedance. The exceedance will be recorded and the vacuum of adjacent wells will be adjusted immediately following the noted exceedance.

#### **Integrated Surface Monitoring**

Due to the existing LFG collection and control system and landfill cover and current use, no integrated surface monitoring is proposed to be undertaken as part of the ACP for the Hewitt Pit Landfill.

#### **Instantaneous Surface Monitoring**

Because of the current surface coverage (asphalt) and current land use (container and movie prop storage), no instantaneous surface sampling is proposed.

#### **Landfill Gas Monitoring**

In accordance with the current Permit to Operate for the flare at the Hewitt Pit Landfill, the inlet to the flare will be field monitored on a monthly basis for methane, oxygen, and pressure, using a Landfill Control Technologies GEM-500, Gas Extraction Monitor, or comparable instrument.

#### **Ambient Air Monitoring**

Due to the LFG collection system operation and type of cover (asphalt) at the Hewitt Pit Landfill, to our knowledge, no odor complaints have previously been recorded. Therefore, no ambient air monitoring is proposed to be conducted as part of the ACP.

#### **Collection and Control System Monitoring**

In accordance with the current Permits to Operate for the Hewitt Pit Landfill, temperature and flow rate information for the enclosed flare are, and will continue to be recorded from the existing collection and control equipment.

#### **Recordkeeping and Reporting**

Data collected from the Hewitt Pit Landfill will be reported to SCAQMD on a quarterly basis, with reports due no later than 45 days after the last day of each calendar quarter. Data reported will include:

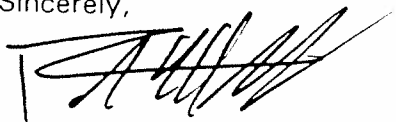
- Monitoring probe exceedances and remedial actions taken.
- Landfill gas monitoring results.
- Description of periods of LFG control and collection system inactivity.

In addition, Hewitt Pit Landfill will maintain continuous records of control equipment temperature and collection equipment flow rate.

SCAQMD  
July 10, 1998  
Page Four

Upon approval of this ACP, Hewitt Pit Landfill will initiate plan activities (monitoring, reporting, etc.). If you have any questions in regard to this submittal please contact either of the undersigned at (562) 426-9544, or George Cosby with CalMat Properties Company at (213) 258-2777

Sincerely,



Ray Huff, R.E.A.  
Project Scientist



Mark Beizer, P.E.  
Vice President  
SCS ENGINEERS

Attachments

cc: **George Cosby, CalMat Properties Company w/attachments**  
Ken Ayster, SCS Field Services, Inc. w/attachments



South Coast Air Quality Management District  
P. O. BOX 4944  
Diamond Bar, CA 91765  
(909) 396-2000

# APPLICATION FOR PLANS FORM 400 - P

## Section I - Company Information

LEGAL NAME OF APPLICANT

CALMAT Properties Company

☒ IRS OR ☐ S.S. NUMBER

95-3115183

PERMIT TO BE ISSUED TO (SEE INSTRUCTIONS) CALMAT Properties

BUSINESS MAILING ADDRESS 3200 San Fernando Road, Los Angeles, CA 90065

## Section II - Facility Information

EQUIPMENT ADDRESS/LOCATION

7245 Laurel Canyon Blvd

NUMBER/STREET

North Hollywood

CA

91605

CITY OR COMMUNITY

ZIP CODE

FACILITY NAME

Hewitt Pit

FACILITY ID NUMBER

3530

NAME OF CONTACT PERSON George Cosby

TITLE Vice President

CONTACT TELEPHONE NUMBER  
(213) 258-2777

TYPE OF BUSINESS AT THIS FACILITY

Storage Containers and Automobile Salvage

BUSINESS TYPE CODE (SEE INSTRUCTIONS)

## Section III - Equipment Information

APPLICATION HEREBY SUBMITTED FOR: Inactive Landfill with a LFG Collection System

RULE NUMBER WHICH THIS APPLICATION APPLIES TO: 1150.1

TYPE OF PLAN APPLICATION:

- ☒ Compliance Plan  
☐ Excavation Plan  
☐ Other

- ☐ Alternative Emission Control Plan (AECp)  
☐ Extreme Performance Coating Classification

IF THIS APPLICATION IS ASSOCIATED WITH CERTAIN DISTRICT APPLICATION(S)/PERMIT(S),  
ENTER APPLICATION/PERMIT NUMBER(S):

D33194

FOR THIS PROJECT HAS A CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) DOCUMENT BEEN REQUIRED BY ANOTHER GOVERNMENTAL AGENCY?  
☒ No ☐ Yes, IF YES, ENTER NAME OF AGENCY AND SUBMIT A COPY IF APPROVED.

DO YOU CLAIM CONFIDENTIALITY OF DATA? (SEE INSTRUCTIONS)

☐ Yes

☒ No

OPERATING SCHEDULE

FOR AECp PLEASE FILL IN THE TABLE BELOW:

	HOURS/DAY	DAYS/WEEK	WEEKS/YEAR		LBS/YEAR	DAYS/YEAR
MAXIMUM	24	7	52	ACTUAL USAGE TWO YEARS AGO	NA	NA
AVERAGE	24	7	52	ACTUAL USAGE LAST YEAR	NA	NA
				PROPOSED AVERAGE USE		

## Section IV - Signature

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT.

SIGNATURE OF RESPONSIBLE OFFICIAL OF FIRM:

TITLE OF RESPONSIBLE OFFICIAL OF FIRM:

TYPE OR PRINT NAME OF RESPONSIBLE OFFICIAL OF FIRM:

VICE PRESIDENT

GEORGE COSBY

(818) 258-2777

DATE SIGNED

07/10/98

I HEREBY CERTIFY THAT ALL INFORMATION CONTAINED HEREIN AND INFORMATION SUBMITTED WITH THIS APPLICATION IS TRUE AND CORRECT.

SIGNATURE OF PREPARER:

TITLE OF PREPARER:

PROJECT SCIENTIST

TYPE OR PRINT NAME OF PREPARER:

PREPARER'S TELEPHONE NUMBER

RAY HUFF, R.E.A.

(562) 426-9544

DATE SIGNED

07/10/98

<b>AQMD</b> <b>USE ONLY</b>	APPLICATION/TRACKING #	PROJECT #	TYPE B C D	EQUIPMENT CATEGORY CODE:	FEE SCHEDULE:	VALIDATION
G. A R	ENG. A R	CLASS I III IV	ASSIGNMENT UNIT	ENF. SECT.	CHECK/MONEY ORDER	AMOUNT
DATE	DATE		ENGINEER		\$	\$

**S C S FIELD SERVICES, INC.**

4014 Long Beach Blvd., 3rd Floor  
Long Beach, CA 90807-3315  
562 492-6222  
FIN-33-0149140

Harbor Gateway Regional Office  
**UNION BANK OF CALIFORNIA**  
21515 Hawthorne Blvd.  
Torrance, CA 90503

06541

16-49  
1220

7/10

1998

PAY Three hundred forty-eight and 10/100-----DOLLARS \$ 348.10\*\*\*\*\*

TO  
THE  
ORDER  
OF

SCAQMD  
21865 E. Copley Dr.  
Diamond Bar, CA 91765

TWO SIGNATURES REQUIRED OVER TWO THOUSAND DOLLARS  
VOID IF NOT CASHED IN 90 DAYS

*Karen Schlotter*

⑈006541⑈ ⑆122000496⑆ 5320121495⑈

S C S FIELD SERVICES, INC.  
FIN 33-0149140

DETACH AND RETAIN THIS STATEMENT  
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW  
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY NO RECEIPT DESIRED

06541

Alternative Compliance  
Plan Application Fee

\$348.10

0789003.01

561.00

kas

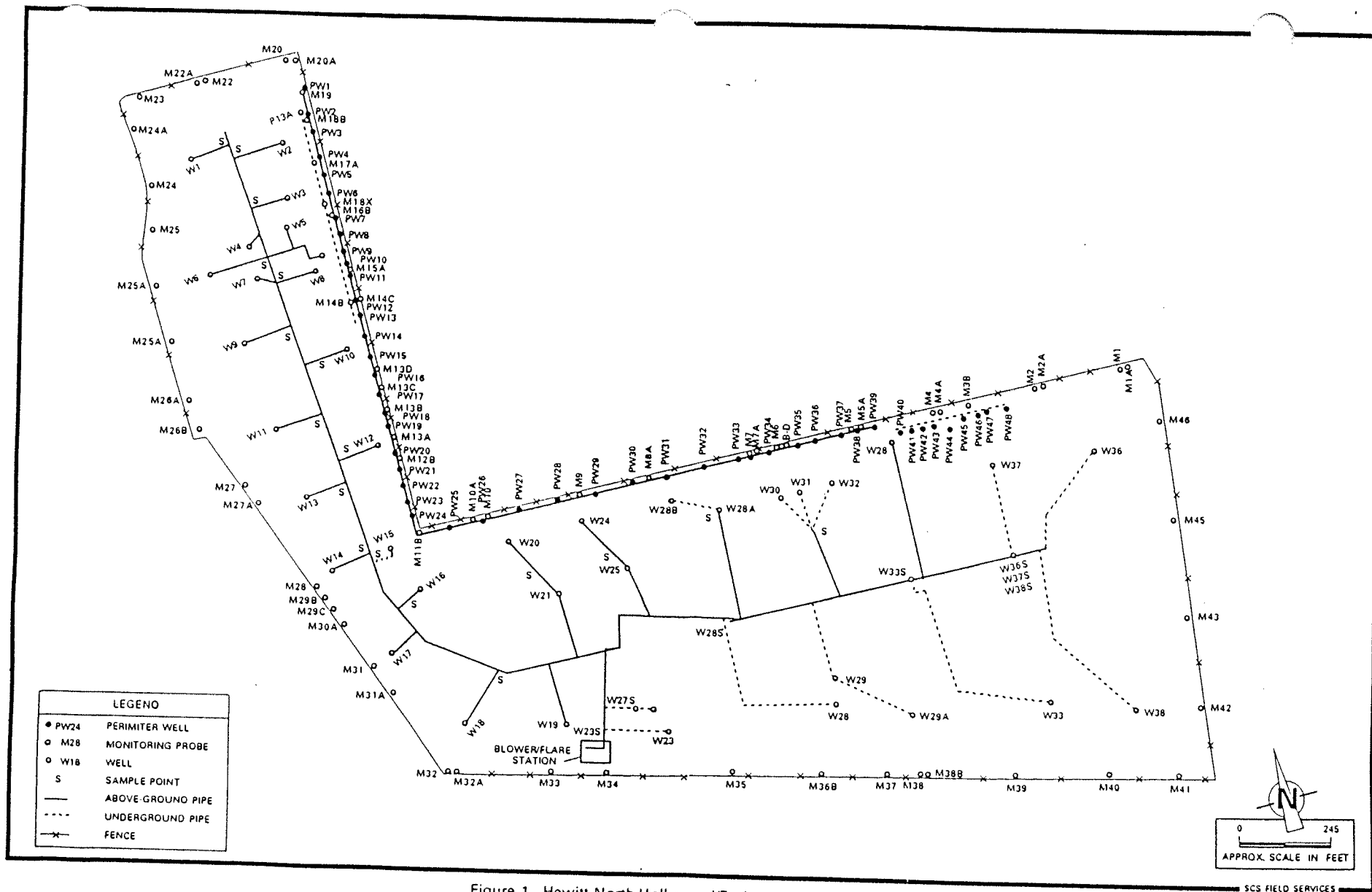


Figure 1. Hewitt North Hollywood/Probes and Well Field.

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.0	ND	
	04/28/98	ND	19.3	ND	
	05/05/98	ND	13.3	ND	
	05/12/98	ND	18.3	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	17.1	ND	
	06/02/98	ND	20.3	ND	
	06/09/98	ND	17.3	ND	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.0	ND	
	06/30/98	ND	20.6	ND	
1A	04/14/98	ND	16.1	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.1	ND	
	05/05/98	ND	14.1	ND	
	05/12/98	ND	18.4	ND	
	05/19/98	ND	18.5	-0.02	
	05/26/98	ND	18.9	ND	
	06/02/98	ND	18.7	ND	
	06/09/98	ND	18.8	ND	
	06/16/98	ND	18.6	ND	
	06/23/98	ND	19.6	0.02	
	06/30/98	ND	18.8	-0.01	
2	04/14/98	ND	19.4	ND	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.3	ND	
	05/05/98	ND	17.0	ND	
	05/12/98	ND	14.4	ND	
	05/19/98	ND	20.0	-0.01	
	05/26/98	ND	18.4	ND	
	06/02/98	ND	19.4	ND	
	06/09/98	ND	20.3	ND	
	06/16/98	ND	14.1	ND	
	06/23/98	ND	19.8	0.01	
	06/30/98	ND	20.0	ND	
2A	04/14/98	ND	19.7	ND	
	04/21/98	ND	20.0	0.01	
	04/28/98	ND	18.6	ND	
	05/05/98	ND	15.9	-0.01	
	05/12/98	ND	13.3	0.01	
	05/19/98	ND	20.1	0.02	
	05/26/98	ND	17.5	0.01	
	06/02/98	ND	17.1	ND	
	06/09/98	ND	18.9	ND	
	06/16/98	ND	13.3	ND	
	06/23/98	ND	19.5	ND	
	06/30/98	ND	18.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
38	04/14/98	ND	20.4	0.02	
	04/21/98	ND	11.8	ND	
	04/28/98	ND	20.5	ND	
	05/05/98	ND	15.1	ND	
	05/12/98	ND	10.9	0.01	
	05/19/98	ND	15.2	0.01	
	05/26/98	ND	13.9	ND	
	06/02/98	ND	13.9	-0.01	
	06/09/98	ND	17.3	ND	
	06/16/98	ND	19.1	ND	
	06/23/98	ND	12.5	ND	
	06/30/98	ND	20.2	-0.01	
4	04/14/98	ND	20.0	ND	
	04/21/98	ND	20.0	0.06	
	04/28/98	ND	19.7	ND	PARTIALLY PLUGGED
	05/05/98	ND	20.0	ND	
	05/12/98	ND	18.7	0.02	
	05/19/98	ND	18.7	0.01	
	05/26/98	ND	19.4	0.01	
	06/02/98	ND	20.0	0.13	
	06/09/98	ND	19.9	ND	
	06/16/98	ND	18.2	ND	
	06/23/98	ND	18.6	0.13	
	06/30/98	ND	18.1	-0.02	
4A	04/14/98	ND	18.4	0.01	
	04/21/98	ND	20.0	0.01	
	04/28/98	ND	19.2	ND	
	05/05/98	ND	16.7	0.01	
	05/12/98	ND	17.3	0.03	
	05/19/98	ND	19.2	ND	
	05/26/98	ND	20.0	ND	
	06/02/98	ND	18.9	0.01	
	06/09/98	ND	19.1	ND	
	06/16/98	ND	18.2	0.04	
	06/23/98	ND	19.7	0.02	
	06/30/98	ND	19.4	-0.01	
5	04/14/98	ND	20.4	-0.08	
	04/21/98	ND	20.2	0.02	
	04/28/98	ND	19.9	0.01	
	05/05/98	ND	17.9	ND	
	05/12/98	ND	16.2	0.04	
	05/19/98	ND	19.9	0.01	
	05/26/98	ND	17.9	ND	
	06/02/98	ND	19.3	ND	
	06/09/98	ND	19.9	-0.07	
	06/16/98	ND	15.2	ND	
	06/23/98	ND	20.5	ND	
	06/30/98	ND	20.6	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
5A	04/14/98	ND	20.1	0.04	PARTIALY PLUGGED
	04/21/98	ND	20.1	0.01	
	04/28/98	ND	20.4	0.21	
	05/05/98	ND	20.4	0.10	
	05/12/98	ND	19.9	ND	
	05/19/98	ND	20.4	0.02	
	05/26/98	ND	20.4	0.01	
	06/02/98	ND	20.4	ND	
	06/09/98	ND	20.5	0.30	
	06/16/98	ND	20.3	0.02	
	06/23/98	ND	20.0	0.02	
	06/30/98	ND	20.2	-0.08	
68	04/14/98	ND	18.3	-0.04	
	04/21/98	ND	20.1	0.01	
	04/28/98	ND	13.9	ND	
	05/05/98	ND	18.0	0.01	
	05/12/98	ND	18.8	0.11	
	05/19/98	ND	17.7	-0.02	
	05/26/98	ND	18.8	ND	
	06/02/98	ND	18.9	ND	
	06/09/98	ND	18.9	-0.06	
	06/16/98	ND	18.7	0.03	
	06/23/98	ND	18.8	0.08	
	06/30/98	ND	19.2	-0.02	
6C	04/14/98	ND	17.8	ND	
	04/21/98	ND	19.4	ND	
	04/28/98	ND	17.1	ND	
	05/05/98	ND	17.7	-0.01	
	05/12/98	ND	17.3	ND	
	05/19/98	ND	17.3	-0.01	
	05/26/98	ND	17.6	ND	
	06/02/98	ND	17.7	ND	
	06/09/98	ND	17.3	ND	
	06/16/98	ND	16.9	ND	
	06/23/98	ND	17.2	ND	
	06/30/98	ND	17.5	ND	
6D	04/14/98	ND	19.1	-0.04	
	04/21/98	ND	20.0	ND	
	04/28/98	ND	18.5	0.02	
	05/05/98	ND	19.2	-0.03	
	05/12/98	ND	18.8	0.02	
	05/19/98	ND	19.5	-0.02	
	05/26/98	ND	19.4	ND	
	06/02/98	ND	19.0	ND	
	06/09/98	ND	20.0	-0.07	
	06/16/98	ND	18.8	ND	
	06/23/98	ND	18.8	0.04	
	06/30/98	ND	19.8	-0.10	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
7	04/14/98	ND	20.6	0.02	PARTLY PULLED
	04/21/98	ND	20.4	0.10	PARTIALLY PLUGGED
	04/28/98	ND	20.2	0.03	PARTIALLY PLUGGED
	05/05/98	NT	NT	NT	PLUGGED
	05/12/98	ND	20.2	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.7	ND	
	06/02/98	ND	20.8	4.50	PARTIALLY PLUGGED
	06/09/98	ND	20.5	-0.03	
	06/16/98	ND	20.6	0.01	
	06/23/98	ND	20.5	-0.01	
	06/30/98	ND	20.5	ND	PARTIALLY PLUGGED
7A	04/14/98	ND	20.2	ND	
	04/21/98	ND	20.0	0.01	
	04/28/98	ND	19.9	-0.01	
	05/05/98	ND	20.1	ND	
	05/12/98	ND	20.5	ND	
	05/19/98	ND	20.3	0.01	
	05/26/98	ND	20.3	ND	
	06/02/98	ND	20.4	0.02	
	06/09/98	ND	20.5	-0.05	
	06/16/98	ND	20.5	ND	
	06/23/98	ND	20.6	0.01	
	06/30/98	ND	20.6	ND	
8A	04/14/98	ND	17.9	-0.04	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	17.0	-0.02	
	05/05/98	ND	17.5	ND	
	05/12/98	ND	20.3	ND	
	05/19/98	ND	20.1	0.03	
	05/26/98	ND	19.0	ND	
	06/02/98	ND	15.6	ND	
	06/09/98	ND	17.5	-0.06	
	06/16/98	ND	17.7	-0.01	
	06/23/98	ND	18.5	0.01	
	06/30/98	ND	17.9	-0.04	
9	04/14/98	ND	20.6	-0.08	
	04/21/98	ND	20.5	ND	
	04/28/98	ND	20.7	-0.03	
	05/05/98	0.2	18.3	-0.06	
	05/12/98	ND	18.9	-0.02	
	05/19/98	ND	20.4	-0.02	
	05/26/98	ND	20.8	-0.02	
	06/02/98	ND	18.6	-0.03	
	06/09/98	ND	20.4	0.01	
	06/16/98	ND	20.6	-0.06	
	06/23/98	ND	20.0	0.02	
	06/30/98	ND	20.6	-0.10	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
10	04/14/98	ND	19.8	-0.04	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	19.9	-0.11	
	05/05/98	ND	18.6	-0.06	
	05/12/98	ND	19.9	ND	
	05/19/98	ND	20.0	ND	
	05/26/98	ND	20.6	ND	
	06/02/98	ND	20.1	ND	
	06/09/98	ND	19.8	0.16	
	06/16/98	ND	20.2	ND	
	06/23/98	ND	20.0	0.01	
	06/30/98	ND	20.3	-0.02	
10A	04/14/98	ND	20.2	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.0	0.01	
	05/05/98	ND	20.3	-0.04	
	05/12/98	ND	20.2	ND	
	05/19/98	ND	20.4	-0.01	
	05/26/98	ND	20.3	ND	
	06/02/98	ND	20.5	ND	
	06/09/98	ND	20.4	-0.02	
	06/16/98	ND	20.0	ND	
	06/23/98	ND	20.4	0.01	
	06/30/98	ND	20.2	ND	
11B	04/14/98	ND	20.6	-0.04	
	04/21/98	ND	20.5	ND	
	04/28/98	ND	20.3	-0.02	
	05/05/98	ND	20.8	-0.08	
	05/12/98	ND	20.5	ND	
	05/19/98	ND	20.5	ND	
	05/26/98	ND	20.5	-0.04	
	06/02/98	ND	20.5	0.01	
	06/09/98	ND	20.3	-0.08	
	06/16/98	ND	20.6	-0.04	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.4	-0.05	
12B	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.6	-0.02	
	05/05/98	ND	20.7	-0.07	
	05/12/98	ND	20.1	ND	
	05/19/98	ND	20.5	ND	
	05/26/98	ND	20.7	ND	
	06/02/98	ND	20.7	ND	
	06/09/98	ND	20.8	-0.09	
	06/16/98	ND	20.6	ND	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.3	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
13B	04/14/98	ND	20.5	-0.02	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.7	-0.01	
	05/05/98	ND	19.4	-0.04	
	05/12/98	ND	19.4	0.01	
	05/19/98	ND	20.4	-0.01	
	05/26/98	ND	20.7	-0.02	
	06/02/98	ND	20.8	ND	
	06/09/98	ND	20.6	0.05	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.4	-0.02	
13D	04/14/98	ND	20.4	-0.03	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	15.5	-0.01	
	05/05/98	ND	20.7	-0.03	
	05/12/98	ND	19.2	0.01	
	05/19/98	ND	20.5	-0.04	
	05/26/98	ND	20.8	-0.02	
	06/02/98	ND	20.8	ND	
	06/09/98	ND	20.7	0.04	
	06/16/98	ND	20.5	ND	
	06/23/98	ND	20.5	0.01	
	06/30/98	ND	20.4	-0.02	
13C	04/14/98	ND	20.3	-0.01	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.2	ND	
	05/05/98	ND	20.2	-0.02	
	05/12/98	ND	20.5	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.6	-0.01	
	06/02/98	ND	26.5	ND	
	06/09/98	ND	20.7	0.04	
	06/16/98	ND	20.1	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	20.3	-0.04	
13X	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.6	0.01	
	05/05/98	ND	20.6	-0.01	
	05/12/98	ND	19.4	0.01	
	05/19/98	ND	19.8	0.01	
	05/26/98	ND	20.8	ND	
	06/02/98	ND	26.4	ND	
	06/09/98	ND	20.6	-0.02	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	20.4	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
14B	04/14/98	ND	20.6	0.04	PARTLY PULLED
	04/21/98	ND	20.4	0.20	PARTIALLY PLUGGED
	04/28/98	ND	20.8	ND	
	05/05/98	NT	NT	NT	PLUGGED
	05/12/98	ND	19.3	ND	
	05/19/98	ND	20.4	1.1	
	05/26/98	ND	20.8	ND	
	06/02/98	ND	20.7	3.00	PARTIALLY PLUGGED
	06/09/98	ND	20.8	0.83	PARTIALLY PLUGGED
	06/16/98	ND	20.4	0.27	
	06/23/98	ND	20.6	1.4	
	06/30/98	ND	20.6	0.03	PARTIALLY PLUGGED
14C	04/14/98	ND	20.3	ND	
	04/21/98	ND	19.2	0.02	
	04/28/98	ND	20.5	ND	
	05/05/98	ND	15.3	ND	
	05/12/98	ND	18.9	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.3	ND	
	06/02/98	ND	20.5	ND	
	06/09/98	ND	19.8	-0.02	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	18.2	0.01	
	06/30/98	ND	20.4	ND	
15A	04/14/98	ND	20.6	0.03	PARTIALLY PULLED
	04/21/98	ND	20.4	0.12	PARTIALLY PLUGGED
	04/28/98	NT	NT	NT	PLUGGED
	05/05/98	NT	NT	NT	PLUGGED
	05/12/98	ND	20.6	0.03	
	05/19/98	ND	20.3	0.01	
	05/26/98	ND	20.5	0.01	
	06/02/98	ND	20.8	2.40	PARTIALLY PLUGGED
	06/09/98	ND	20.8	0.40	PARTIALLY PLUGGED
	06/16/98	ND	20.5	0.02	PARTIALLY PLUGGED
	06/23/98	ND	19.5	ND	
	06/30/98	ND	20.6	0.04	PARTIALLY PLUGGED
16A	04/14/98	ND	20.4	ND	
	04/21/98	ND	10.6	0.01	
	04/28/98	ND	10.5	ND	
	05/05/98	ND	13.4	ND	
	05/12/98	ND	15.5	0.02	
	05/19/98	ND	14.0	-0.02	
	05/26/98	ND	14.0	-0.01	
	06/02/98	ND	20.0	0.02	
	06/09/98	ND	20.5	-0.03	
	06/16/98	ND	14.5	-0.01	
	06/23/98	ND	14.2	0.01	
	06/30/98	ND	15.7	-0.06	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
16X	04/14/98	ND	20.4	ND	PARTIALLY PLUGGED
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.0	0.01	
	05/05/98	ND	19.5	-0.02	
	05/12/98	ND	19.2	-0.01	
	05/19/98	ND	19.9	ND	
	05/26/98	ND	20.6	0.01	
	06/02/98	ND	20.1	ND	
	06/09/98	ND	20.0	ND	
	06/16/98	ND	18.7	ND	
	06/23/98	ND	20.1	ND	
	06/30/98	ND	20.4	ND	
17A	04/14/98	ND	10.1	ND	
	04/21/98	ND	12.0	ND	
	04/28/98	ND	12.5	0.04	
	05/05/98	ND	12.8	-0.02	
	05/12/98	ND	15.8	0.02	
	05/19/98	ND	13.7	ND	
	05/26/98	ND	17.4	ND	
	06/02/98	ND	13.7	0.33	
	06/09/98	ND	14.5	0.10	
	06/16/98	ND	14.1	0.03	
	06/23/98	ND	14.1	ND	
	06/30/98	ND	15.7	-0.01	
18B	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	17.7	0.01	
	04/28/98	ND	13.6	ND	
	05/05/98	ND	14.3	-0.02	
	05/12/98	ND	20.1	ND	
	05/19/98	ND	18.0	ND	
	05/26/98	ND	20.7	0.02	
	06/02/98	ND	15.4	0.02	
	06/09/98	ND	16.1	-0.02	
	06/16/98	ND	16.6	ND	
	06/23/98	ND	18.7	0.01	
	06/30/98	ND	16.4	ND	
19	04/14/98	ND	19.6	-0.01	
	04/21/98	ND	18.9	0.02	
	04/28/98	ND	19.4	ND	
	05/05/98	ND	19.0	0.01	
	05/12/98	ND	19.1	ND	
	05/19/98	ND	20.1	ND	
	05/26/98	ND	19.5	ND	
	06/02/98	ND	19.3	0.01	
	06/09/98	ND	19.3	ND	
	06/16/98	ND	18.2	ND	
	06/23/98	ND	18.8	0.01	
	06/30/98	ND	18.7	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
20	04/14/98	ND	17.9	0.02	
	04/21/98	ND	18.4	0.01	
	04/28/98	ND	18.1	ND	
	05/05/98	ND	18.0	ND	
	05/12/98	ND	15.3	0.01	
	05/19/98	ND	17.3	-0.01	
	05/26/98	ND	18.4	0.02	
	06/02/98	ND	15.8	0.01	
	06/09/98	ND	17.5	ND	
	06/16/98	ND	17.4	ND	
	06/23/98	ND	17.6	ND	
	06/30/98	N	017.5	0.03	
20A	04/14/98	ND	20.1	0.02	
	04/21/98	ND	17.9	0.01	
	04/28/98	ND	16.6	ND	
	05/05/98	ND	17.3	ND	
	05/12/98	ND	19.8	0.04	
	05/19/98	ND	18.0	-0.01	
	05/26/98	ND	18.9	0.04	
	06/02/98	ND	17.3	0.01	
	06/09/98	ND	17.7	ND	
	06/16/98	ND	17.6	0.02	
	06/23/98	ND	17.7	ND	
	06/30/98	ND	17.7	0.04	
22	04/14/98	ND	20.2	0.02	
	04/21/98	ND	18.6	0.01	
	04/28/98	ND	17.9	0.01	
	05/05/98	ND	20.1	ND	
	05/12/98	ND	20.4	0.03	
	05/19/98	ND	18.9	0.02	
	05/26/98	ND	20.3	0.01	
	06/02/98	ND	19.9	ND	
	06/09/98	ND	20.4	0.01	
	06/16/98	ND	20.5	0.02	
	06/23/98	ND	18.4	ND	
	06/30/98	ND	19.1	-0.02	
22A	04/14/98	ND	19.7	ND	
	04/21/98	ND	18.8	0.02	
	04/28/98	ND	18.6	0.31	PARTIALLY PLUGGED
	05/05/98	ND	20.6	ND	
	05/12/98	ND	19.9	0.02	
	05/19/98	ND	18.3	0.06	
	05/26/98	ND	20.6	0.02	
	06/02/98	ND	20.1	0.10	
	06/09/98	ND	20.1	0.01	
	06/16/98	ND	18.4	ND	
	06/23/98	ND	19.8	ND	
	06/30/98	ND	18.8	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
23	04/14/98	ND	20.3	0.04	
	04/21/98	ND	20.1	0.06	PARTIALLY PLUGGED
	04/28/98	ND	20.5	0.34	PARTIALLY PLUGGED
	05/05/98	ND	20.5	0.01	
	05/12/98	ND	20.2	ND	
	05/19/98	ND	20.4	1.3	
	05/26/98	ND	20.6	ND	
	06/02/98	ND	19.7	0.01	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	19.6	0.06	
	06/23/98	ND	19.9	2.30	
	06/30/98	N	020.4	0.02	
24	04/14/98	ND	20.2	-0.02	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.4	ND	
	05/05/98	ND	19.3	-0.04	
	05/12/98	ND	18.2	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.0	ND	
	06/02/98	ND	20.5	0.01	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	19.4	ND	
	06/23/98	ND	20.2	ND	
	06/30/98	ND	20.5	ND	
24A	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	19.6	0.01	
	05/05/98	ND	20.3	-0.01	
	05/12/98	ND	20.1	0.01	
	05/19/98	ND	20.2	ND	
	05/26/98	ND	19.8	ND	
	06/02/98	ND	19.7	ND	
	06/09/98	ND	20.6	ND	
	06/16/98	ND	19.8	ND	
	06/23/98	ND	20.3	0.01	
	06/30/98	ND	20.2	ND	
25	04/14/98	ND	20.3	-0.01	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	16.7	ND	
	05/05/98	ND	18.9	ND	
	05/12/98	ND	20.1	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.7	ND	
	06/02/98	ND	20.7	ND	
	06/09/98	ND	19.4	-0.02	
	06/16/98	ND	20.6	ND	
	06/23/98	ND	20.5	0.02	
	06/30/98	ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
25A	04/14/98	ND	20.5	-0.02	
	04/21/98	ND	19.8	0.01	
	04/28/98	ND	14.2	ND	
	05/05/98	ND	19.0	-0.02	
	05/12/98	ND	17.3	-0.01	
	05/19/98	ND	20.4	-0.01	
	05/26/98	ND	20.3	-0.02	
	06/02/98	ND	19.4	ND	
	06/09/98	ND	19.7	-0.01	
	06/16/98	ND	19.4	ND	
	06/23/98	ND	19.5	ND	
	06/30/98	ND	19.0	ND	
26	04/14/98	ND	20.4	-0.01	
	04/21/98	ND	19.8	0.01	
	04/28/98	ND	19.7	0.01	
	05/05/98	ND	19.8	-0.03	
	05/12/98	ND	19.8	0.02	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.3	ND	
	06/02/98	ND	20.1	0.01	
	06/09/98	ND	20.3	ND	
	06/16/98	ND	19.6	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.2	ND	
26A	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	20.0	0.03	
	05/05/98	ND	20.2	-0.03	
	05/12/98	ND	18.5	ND	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	20.4	-0.01	
	06/02/98	ND	20.1	ND	
	06/09/98	ND	20.0	0.01	
	06/16/98	ND	19.7	ND	
	06/23/98	ND	20.1	0.01	
	06/30/98	ND	19.7	ND	
26B	04/14/98	ND	20.2	-0.01	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.3	ND	
	05/05/98	ND	19.9	0.01	
	05/12/98	ND	19.2	ND	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	19.9	-0.01	
	06/02/98	ND	19.8	0.01	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	19.6	0.01	
	06/23/98	ND	20.0	0.02	
	06/30/98	ND	20.1	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
27	04/14/98	ND	20.2	ND	
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	19.9	ND	
	05/05/98	ND	20.4	ND	
	05/12/98	ND	16.7	ND	
	05/19/98	ND	20.3	-0.01	
	05/26/98	ND	20.4	0.01	
	06/02/98	ND	20.3	ND	
	06/09/98	ND	19.5	-0.01	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.3	ND	
27A	04/14/98	ND	19.6	ND	
	04/21/98	ND	20.2	0.01	
	04/28/98	ND	19.7	ND	
	05/05/98	ND	20.8	ND	
	05/12/98	ND	20.5	0.03	
	05/19/98	ND	19.7	0.01	
	05/26/98	ND	20.2	ND	
	06/02/98	ND	19.6	-0.02	
	06/09/98	ND	20.3	-0.02	
	06/16/98	ND	19.6	0.02	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	19.4	ND	
28	04/14/98	ND	20.6	-0.01	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	20.2	ND	
	05/05/98	ND	20.6	ND	
	05/12/98	ND	19.3	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.8	-0.01	
	06/02/98	ND	20.0	ND	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	20.2	-0.01	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.3	ND	
30A	04/14/98	ND	20.1	0.04	
	04/21/98	ND	20.4	0.02	PARTIALLY PLUGGED
	04/28/98	ND	20.1	0.04	PARTIALLY PLUGGED
	05/05/98	ND	20.1	0.02	
	05/12/98	ND	20.8	0.03	
	05/19/98	ND	20.2	1.0	
	05/26/98	ND	20.8	ND	
	06/02/98	ND	20.5	0.18	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	20.6	0.14	
	06/23/98	ND	20.5	1.50	
	06/30/98	ND	20.3	0.08	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
-----	-----	-----	-----	-----	-----
31	04/14/98	ND	20.6	0.06	PARTIALLY PLUGGED
	04/21/98	ND	20.4	0.10	
	04/28/98	ND	19.9	0.03	
	05/05/98	ND	19.6	0.04	
	05/12/98	ND	20.8	0.07	
	05/19/98	ND	20.4	2.1	
	05/26/98	ND	20.5	0.01	
	06/02/98	ND	20.3	0.28	
	06/09/98	ND	20.4	0.34	
	06/16/98	ND	20.5	0.02	
	06/23/98	ND	20.3	3.40	
	06/30/98	ND	20.3	0.04	
31A	04/14/98	ND	18.2	0.72	PARTIALLY PLUGGED
	04/21/98	ND	20.4	0.18	
	04/28/98	ND	17.6	0.02	
	05/05/98	ND	20.1	0.01	
	05/12/98	ND	20.4	0.01	
	05/19/98	ND	20.4	1.3	
	05/26/98	ND	20.6	ND	
	06/02/98	N	019.7	0.14	
	06/09/98	ND	19.5	0.03	
	06/16/98	ND	18.6	0.48	
	06/23/98	ND	20.4	1.20	
	06/30/98	ND	18.6	0.06	
32	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	28.5	0.01	
	05/05/98	ND	20.4	ND	
	05/12/98	ND	19.9	0.01	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	20.4	0.01	
	06/02/98	ND	20.3	ND	
	06/09/98	ND	18.9	ND	
	06/16/98	ND	20.3	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.4	0.01	
32A	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.4	-0.01	
	04/28/98	ND	20.2	ND	
	05/05/98	ND	20.7	-0.02	
	05/12/98	ND	19.6	ND	
	05/19/98	ND	20.4	0.01	
	05/26/98	ND	20.4	ND	
	06/02/98	ND	18.1	ND	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	20.3	ND	
	06/23/98	ND	20.4	ND	
		ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	06/30/98	ND	20.5	0.01	
33	04/14/98	ND	19.6	ND	
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	20.1	ND	
	05/05/98	ND	18.9	ND	
	05/12/98	ND	17.7	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	19.5	ND	
	06/02/98	ND	19.6	ND	
	06/09/98	ND	19.9	ND	
	06/16/98	ND	19.2	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	19.8	ND	
34	04/14/98	ND	16.3	-0.01	
	04/21/98	ND	19.1	0.01	
	04/28/98	ND	19.9	0.01	
	05/05/98	ND	16.4	0.01	
	05/12/98	ND	17.1	0.02	
	05/19/98	ND	19.6	ND	
	05/26/98	ND	14.6	-0.01	
	06/02/98	ND	19.9	ND	
	06/09/98	ND	20.6	ND	
	06/16/98	ND	14.1	ND	
	06/23/98	ND	18.7	ND	
	06/30/98	ND	17.8	ND	
35	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.5	ND	
	05/05/98	ND	20.0	0.03	
	05/12/98	ND	20.4	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.5	ND	
	06/02/98	ND	20.3	0.02	
	06/09/98	ND	20.6	ND	
	06/16/98	ND	20.7	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	20.3	0.01	
36B	04/14/98	ND	19.1	ND	
	04/21/98	ND	18.8	-0.01	
	04/28/98	ND	19.3	ND	
	05/05/98	ND	17.9	0.03	
	05/12/98	ND	12.9	0.05	
	05/19/98	ND	18.3	ND	
	05/26/98	ND	20.7	ND	
	06/02/98	ND	19.4	ND	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	18.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
36B	06/23/98	ND	18.3	0.02	
	06/30/98	ND	18.2	ND	
37	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.9	ND	
	05/05/98	ND	20.3	0.09	
	05/12/98	ND	19.6	ND	
	05/19/98	ND	20.1	-0.01	
	05/26/98	ND	20.5	ND	
	06/02/98	ND	20.5	ND	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.6	0.01	
	06/30/98	ND	20.4	ND	
38	04/14/98	ND	18.2	-0.04	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	20.8	ND	
	05/05/98	ND	20.1	0.05	
	05/12/98	18.7	0.3	0.03	
	05/19/98	ND	20.4	-0.06	
	05/26/98	ND	20.2	0.02	
	06/02/98	ND	20.3	ND	
	06/09/98	ND	20.5	-0.04	
	06/16/98	0.9	8.1	ND	
	06/23/98	0.1	12.4	0.02	
	06/30/98	NT	NT	NT	DAMAGED
39	04/14/98	ND	20.4	0.04	
	04/21/98	ND	20.4	0.11	
	04/28/98	ND	19.6	0.10	PARTIALLY PLUGGED
	05/05/98	ND	20.4	-0.18	
	05/12/98	ND	20.4	0.29	
	05/19/98	NT	NT	NT	PLUGGED
	05/26/98	ND	20.6	ND	
	06/02/98	ND	20.6	0.10	
	06/09/98	ND	20.4	0.21	PARTIALLY PLUGGED
	06/16/98	ND	20.3	2.10	
	06/23/98	ND	20.6	0.11	
	06/30/98	N	020.4	ND	
40	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	19.8	ND	
	05/05/98	ND	18.8	0.01	
	05/12/98	ND	20.5	ND	
	05/19/98	ND	20.5	ND	
	05/26/98	ND	20.6	ND	
	06/02/98	ND	20.5	0.01	
	06/09/98	ND	20.5	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
40	06/16/98	ND	20.5	ND	
	06/23/98	ND	20.4	0.01	
	06/30/98	ND	20.4	ND	
41	04/14/98	ND	19.7	0.01	
	04/21/98	ND	19.8	ND	
	04/28/98	ND	19.1	0.01	
	05/05/98	ND	18.9	-0.02	
	05/12/98	ND	18.2	0.01	
	05/19/98	ND	19.8	0.01	
	05/26/98	ND	15.4	0.02	
	06/02/98	ND	16.3	0.01	
	06/09/98	ND	17.6	ND	
	06/16/98	ND	14.1	-0.01	
	06/23/98	ND	19.2	ND	
	06/30/98	ND	18.8	ND	
42	04/14/98	ND	19.7	-0.01	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.3	ND	
	05/05/98	ND	15.3	ND	
	05/12/98	ND	20.3	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	17.1	0.04	
	06/02/98	ND	18.5	ND	
	06/09/98	ND	20.1	0.02	
	06/16/98	ND	9.4	0.01	
	06/23/98	ND	18.9	0.01	
	06/30/98	ND	19.2	0.01	
43	04/14/98	ND	12.2	-0.02	
	04/21/98	ND	20.1	-0.02	
	04/28/98	ND	14.5	0.02	
	05/05/98	ND	11.8	ND	
	05/12/98	ND	1.6	ND	
	05/19/98	ND	9.1	-0.01	
	05/26/98	ND	13.5	ND	
	06/02/98	ND	9.9	ND	
	06/09/98	ND	10.5	ND	
	06/16/98	ND	9.2	ND	
	06/23/98	ND	16.6	0.01	
	06/30/98	ND	12.1	-0.02	
45	04/14/98	ND	20.3	-0.02	
	04/21/98	ND	20.0	-0.01	
	04/28/98	ND	18.9	0.01	
	05/05/98	ND	17.3	0.01	
	05/12/98	ND	19.3	0.04	
	05/19/98	ND	20.1	-0.02	
	05/26/98	ND	20.3	-0.02	
	06/02/98	ND	20.1	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
45	06/09/98	ND	19.6	-0.02	
	06/16/98	ND	19.8	ND	
	06/23/98	ND	16.9	0.02	
	06/30/98	ND	19.9	-0.01	
46	04/14/98	ND	20.2	0.02	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	20.7	ND	
	05/05/98	ND	20.1	ND	
	05/12/98	ND	19.1	ND	
	05/19/98	ND	20.2	-0.01	
	05/26/98	ND	20.7	ND	
	06/02/98	ND	20.6	ND	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	20.2	0.01	
	06/23/98	ND	20.1	0.01	
	06/30/98	ND	20.4	ND	
1B'	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.9	ND	
	05/05/98	ND	18.3	-0.03	
	05/12/98	ND	17.1	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	18.0	ND	
	06/02/98	ND	20.0	ND	
	06/09/98	ND	20.5	-0.01	
	06/16/98	ND	20.2	0.01	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.5	-0.01	
1C'	04/14/98	ND	19.8	-0.01	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	20.6	ND	
	05/05/98	ND	19.1	-0.02	
	05/12/98	ND	17.5	0.02	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	19.3	ND	
	06/02/98	ND	20.7	ND	
	06/09/98	ND	20.6	-0.02	
	06/16/98	ND	19.8	0.02	
	06/23/98	ND	20.0	ND	
	06/30/98	ND	20.1	-0.06	
2B'	04/14/98	ND	18.9	ND	
	04/21/98	ND	20.3	0.01	
	04/28/98	ND	20.2	ND	
	05/05/98	ND	19.1	-0.02	
	05/12/98	ND	17.7	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	19.8	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
2B'	06/02/98	ND	20.1	ND	
	06/09/98	ND	20.5	-0.05	
	06/16/98	ND	20.2	ND	
	06/23/98	ND	20.4	0.01	
	06/30/98	ND	20.6	-0.01	
2C'	04/14/98	ND	20.3	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	20.5	0.01	
	05/05/98	ND	20.6	-0.01	
	05/12/98	ND	16.2	0.02	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.6	ND	
	06/02/98	ND	20.8	0.01	
	06/09/98	ND	20.3	-0.03	
	06/16/98	ND	18.6	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.5	ND	
3B'	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	20.6	0.03	
	05/05/98	ND	18.3	-0.02	
	05/12/98	ND	16.7	0.01	
	05/19/98	ND	20.5	-0.03	
	05/26/98	ND	20.6	ND	
	06/02/98	ND	20.5	ND	
	06/09/98	ND	19.9	-0.02	
	06/16/98	ND	18.2	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.5	-0.02	
3C'	04/14/98	ND	20.6	ND	
	04/21/98	ND	19.3	0.01	
	04/28/98	ND	20.0	0.05	
	05/05/98	ND	17.8	-0.02	
	05/12/98	ND	15.6	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	13.9	ND	
	06/02/98	ND	20.0	0.03	
	06/09/98	ND	20.2	-0.02	
	06/16/98	ND	12.0	0.01	
	06/23/98	ND	20.3	0.01	
	06/30/98	ND	20.6	-0.12	
4B'	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	17.3	ND	
	05/05/98	ND	16.9	-0.02	
	05/12/98	ND	15.0	0.01	
	05/19/98	ND	20.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
4B'	05/26/98	ND	18.4	-0.01	
	06/02/98	ND	19.8	0.04	
	06/09/98	ND	20.6	-0.10	
	06/16/98	ND	16.4	ND	
	06/23/98	ND	19.9	ND	
	06/30/98	ND	20.5	-0.02	
4C'	04/14/98	ND	19.4	ND	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	16.9	0.01	
	05/05/98	ND	17.5	-0.01	
	05/12/98	ND	15.3	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.7	ND	
	06/02/98	ND	19.7	0.02	
	06/09/98	ND	19.3	-0.05	
	06/16/98	ND	14.2	-0.01	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.6	-0.02	
5B'	04/14/98	ND	13.7	-0.01	
	04/21/98	ND	19.8	0.01	
	04/28/98	ND	16.4	0.03	
	05/05/98	ND	16.3	-0.05	
	05/12/98	ND	16.8	0.04	
	05/19/98	ND	19.8	ND	
	05/26/98	ND	17.8	-0.03	
	06/02/98	ND	16.9	0.03	
	06/09/98	ND	20.1	-0.03	
	06/16/98	ND	17.3	ND	
	06/23/98	ND	20.1	ND	
	06/30/98	ND	20.6	-0.08	
5C'	04/14/98	ND	20.3	-0.01	
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	17.4	0.03	
	05/05/98	ND	20.4	-0.07	
	05/12/98	ND	18.7	0.04	
	05/19/98	ND	19.8	ND	
	05/26/98	ND	19.5	-0.02	
	06/02/98	ND	19.3	0.01	
	06/09/98	ND	20.4	-0.02	
	06/16/98	ND	16.8	0.03	
	06/23/98	ND	18.2	0.01	
	06/30/98	ND	19.3	-0.04	
6B'	04/14/98	ND	20.6	ND	
	04/21/98	ND	19.4	0.01	
	04/28/98	ND	19.9	ND	
	05/05/98	ND	19.1	-0.02	
	05/12/98	ND	12.9	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6B'	05/19/98	ND	20.3	ND	
	05/26/98	ND	20.6	-0.01	
	06/02/98	ND	20.0	ND	
	06/09/98	ND	19.8	-0.01	
	06/16/98	ND	19.9	0.01	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.5	ND	
6C'	04/14/98	ND	20.4	-0.01	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.5	ND	
	05/05/98	ND	17.9	-0.02	
	05/12/98	ND	13.8	-0.01	
	05/19/98	ND	19.1	ND	
	05/26/98	ND	20.5	-0.01	
	06/02/98	ND	20.2	ND	
	06/09/98	ND	20.1	-0.01	
	06/16/98	ND	11.6	0.02	
	06/23/98	ND	20.0	ND	
	06/30/98	ND	20.6	ND	
7B'	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	15.5	0.01	
	05/05/98	ND	16.9	-0.02	
	05/12/98	ND	17.6	-0.02	
	05/19/98	ND	19.0	-0.01	
	05/26/98	ND	18.3	ND	
	06/02/98	ND	18.3	-0.01	
	06/09/98	ND	18.3	-0.02	
	06/16/98	ND	17.9	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	18.6	0.02	
7C'	04/14/98	ND	18.1	ND	
	04/21/98	ND	20.0	ND	
	04/28/98	ND	16.2	0.01	
	05/05/98	ND	17.3	-0.02	
	05/12/98	ND	17.6	-0.02	
	05/19/98	ND	18.6	-0.01	
	05/26/98	ND	18.8	ND	
	06/02/98	ND	18.6	-0.01	
	06/09/98	ND	19.4	-0.01	
	06/16/98	ND	17.2	0.01	
	06/23/98	ND	20.1	ND	
	06/30/98	ND	19.1	ND	
8B'	04/14/98	ND	20.6	-0.02	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.7	ND	
	05/05/98	ND	16.5	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
8B'	05/12/98	ND	18.9	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.6	ND	
	06/02/98	ND	19.5	0.01	
	06/09/98	ND	20.7	-0.03	
	06/16/98	ND	16.8	0.06	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.6	ND	
8C'	04/14/98	ND	20.6	-0.01	
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	20.5	0.01	
	05/05/98	ND	18.7	ND	
	05/12/98	ND	17.6	ND	
	05/19/98	ND	20.3	0.01	
	05/26/98	ND	20.6	ND	
	06/02/98	ND	20.6	ND	
	06/09/98	ND	26.6	-0.01	
	06/16/98	ND	16.7	0.03	
	06/23/98	ND	19.1	ND	
	06/30/98	ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

July 21, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

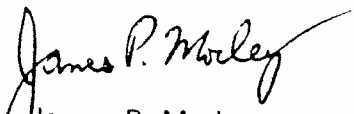
Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood,  
California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the June 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, no methane gas was detected in any of the monitoring wells tested.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

  
James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP 0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]
1	06/02/98	ND	20.3	ND
1A	06/02/98	ND	18.7	ND
2	06/02/98	ND	19.4	ND
2A	06/02/98	ND	17.1	ND
3B	06/02/98	ND	13.9	-0.01
4	06/02/98	ND	20.0	0.13
4A	06/02/98	ND	18.9	0.01
5	06/02/98	ND	19.3	ND
5A	06/02/98	ND	20.4	ND
6B	06/02/98	ND	18.9	ND
6C	06/02/98	ND	17.7	ND
6D	06/02/98	ND	19.0	ND
7	06/02/98	ND	20.8	-1.50
7A	06/02/98	ND	20.4	0.02
8A	06/02/98	ND	15.6	ND
9	06/02/98	ND	18.6	-0.03
10	06/02/98	ND	20.1	ND
10A	06/02/98	ND	20.5	ND
11B	06/02/98	ND	20.5	0.01
12B	06/02/98	ND	20.7	ND
13B	06/02/98	ND	20.8	ND
13D	06/02/98	ND	20.8	ND
13C	06/02/98	ND	20.5	ND
13X	06/02/98	ND	20.4	ND
14B	06/02/98	ND	20.7	3.00
14C	06/02/98	ND	20.5	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	06/02/98	ND	20.8	2.40
16A	06/02/98	ND	20.0	0.02
16X	06/02/98	ND	20.1	ND
17A	06/02/98	ND	13.7	0.33
18B	06/02/98	ND	15.4	0.02
19	06/02/98	ND	19.3	0.01
20	06/02/98	ND	15.8	0.01
20A	06/02/98	ND	17.3	0.01
22	06/02/98	ND	19.9	ND
22A	06/02/98	ND	20.1	0.10
23	06/02/98	ND	19.7	0.01
24	06/02/98	ND	20.5	0.01
24A	06/02/98	ND	19.7	ND
25	06/02/98	ND	20.7	ND
25A	06/02/98	ND	19.4	ND
26	06/02/98	ND	20.1	0.01
26A	06/02/98	ND	20.1	ND
26B	06/02/98	ND	19.8	0.01
27	06/02/98	ND	20.3	ND
27A	06/02/98	ND	19.6	-0.02
28	06/02/98	ND	20.0	ND
30A	06/02/98	ND	20.5	0.18
31	06/02/98	ND	20.3	0.28
31A	06/02/98	ND	19.7	0.14
32	06/02/98	ND	20.3	ND
32A	06/02/98	ND	18.1	ND

ND=None Detected  
 %-vol=Percent by Volume

NT=Not Taken  
 in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
33	06/02/98	ND	19.6	ND
34	06/02/98	ND	19.9	ND
35	06/02/98	ND	20.3	0.02
36B	06/02/98	ND	19.4	ND
37	06/02/98	ND	20.5	ND
38	06/02/98	ND	20.3	ND
39	06/02/98	ND	20.6	0.10
40	06/02/98	ND	20.5	0.01
41	06/02/98	ND	16.3	0.01
42	06/02/98	ND	18.5	ND
43	06/02/98	ND	9.9	ND
45	06/02/98	ND	20.1	ND
46	06/02/98	ND	20.6	ND
1B'	06/02/98	ND	20.0	ND
1C'	06/02/98	ND	20.7	ND
2B'	06/02/98	ND	20.1	ND
2C'	06/02/98	ND	20.8	0.01
3B'	06/02/98	ND	20.5	ND
3C'	06/02/98	ND	20.0	0.03
4B'	06/02/98	ND	19.8	0.04
4C'	06/02/98	ND	19.7	0.02
5B'	06/02/98	ND	16.9	0.03
5C'	06/02/98	ND	19.3	0.01
6B'	06/02/98	ND	20.0	ND
6C'	06/02/98	ND	20.2	ND
7B'	06/02/98	ND	18.3	-0.01

ND=None Detected  
 %-vol=Percent by Volume

NT=Not Taken  
 in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	06/02/98	ND	18.6	-0.01
8B'	06/02/98	ND	19.5	0.01
8C'	06/02/98	ND	20.6	ND

ND=None Detected

%-vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

August 28, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood,  
California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the July 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, no methane gas was detected in any of the monitoring wells tested.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

  
James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	07/07/98	ND	20.4	-0.01
1A	07/07/98	ND	18.9	-0.01
2	07/07/98	ND	20.1	0.01
2A	07/07/98	ND	20.5	ND
3B	07/07/98	ND	18.8	-0.01
4	07/07/98	ND	20.4	0.01
4A	07/07/98	ND	20.1	ND
5	07/07/98	ND	20.5	0.01
5A	07/07/98	ND	19.4	0.01
6B	07/07/98	ND	18.8	-0.01
6C	07/07/98	ND	17.2	ND
6D	07/07/98	ND	19.8	-0.02
7	07/07/98	ND	19.6	0.01
7A	07/07/98	ND	20.5	-0.04
8A	07/07/98	ND	18.3	0.01
9	07/07/98	ND	20.4	-0.07
10	07/07/98	ND	17.9	-0.01
10A	07/07/98	ND	20.1	ND
11B	07/07/98	ND	20.7	-0.01
12B	07/07/98	ND	20.6	ND
13B	07/07/98	ND	20.6	ND
13D	07/07/98	ND	20.6	ND
13C	07/07/98	ND	20.7	-0.02
13X	07/07/98	ND	20.5	ND
14B	07/07/98	ND	20.3	ND
14C	07/07/98	ND	20.6	0.28

ND=None Detected  
 %-vol=Percent by Volume

NT=Not Taken  
 in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	07/07/98	ND	20.5	0.50
16A	07/07/98	ND	16.6	-0.03
16X	07/07/98	ND	20.3	ND
17A	07/07/98	ND	14.8	ND
18B	07/07/98	ND	14.0	ND
19	07/07/98	ND	19.8	ND
20	07/07/98	ND	18.2	ND
20A	07/07/98	ND	18.3	ND
22	07/07/98	ND	18.7	ND
22A	07/07/98	ND	18.4	ND
23	07/07/98	ND	20.4	1.3
24	07/07/98	ND	20.5	ND
24A	07/07/98	ND	20.4	ND
25	07/07/98	ND	20.3	ND
25A	07/07/98	ND	19.7	-0.01
26	07/07/98	ND	20.4	ND
26A	07/07/98	ND	20.3	ND
26B	07/07/98	ND	19.9	0.01
27	07/07/98	ND	20.1	ND
27A	07/07/98	ND	19.2	ND
28	07/07/98	ND	20.4	ND
30A	07/07/98	ND	20.4	2.4
31	07/07/98	ND	20.4	3.1
31A	07/07/98	ND	19.9	1.0
32	07/07/98	ND	20.3	0.01
32A	07/07/98	ND	20.5	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
33	07/07/98	ND	19.2	ND
34	07/07/98	ND	19.9	0.01
35	07/07/98	ND	20.6	ND
36B	07/07/98	ND	18.1	0.02
37	07/07/98	ND	20.6	ND
38	07/07/98	ND	20.4	ND
39	07/07/98	ND	20.6	0.21
40	07/07/98	ND	20.4	0.01
41	07/07/98	ND	20.5	ND
42	07/07/98	ND	20.2	ND
43	07/07/98	ND	18.9	ND
45	07/07/98	ND	20.0	ND
46	07/07/98	ND	20.2	0.01
1B'	07/07/98	ND	20.5	ND
1C'	07/07/98	ND	20.5	ND
2B'	07/07/98	ND	20.6	-0.01
2C'	07/07/98	ND	20.5	-0.01
3B'	07/07/98	ND	20.6	-0.01
3C'	07/07/98	ND	20.6	-0.05
4B'	07/07/98	ND	19.9	ND
4C'	07/07/98	ND	20.3	ND
5B'	07/07/98	ND	19.8	ND
5C'	07/07/98	ND	20.5	ND
6B'	07/07/98	ND	20.4	ND
6C'	07/07/98	ND	20.2	ND
7B'	07/07/98	ND	19.5	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	07/07/98	ND	20.6	ND
8B'	07/07/98	ND	20.3	ND
8C'	07/07/98	ND	20.6	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

## Disposal Site Inspection Report

Enforcement Agency:

City of Los Angeles

Page 1 of 1

<b>FACILITY FILE NUMBER</b> 19-AR-1160	<b>PROGRAM CODE</b> LOCAL = L STATE = S L	<b>INSPECTION DATE</b> MM DD YY 9/3/98	<b>TIME IN</b>	<b>INSPECTION TIME</b>
<b>NAME</b> Colonel Jack L. Lof 11 (Helmberger today)			<b>TIME OUT</b>	
<b>FACILITY LOCATION</b> 4436 Glencreek Blvd, Sunnyvale, CA			<b>RECEIVED BY (OPERATOR)</b> Vic Alar	
<b>INSPECTOR</b> Martin Rosen	<b>INSPECTOR SIGNATURE</b> Martin Rosen	<b>OWNER</b>		
		<b>ALSO PRESENT</b>		

THE ABOVE FACILITY WAS INSPECTED FOR COMPLIANCE WITH APPLICABLE SECTIONS OF DIVISION 30 OF THE PUBLIC RESOURCES CODE (PRC) AND TITLE 27 CALIFORNIA CODE OF REGULATION (CCR).

THE STANDARDS BELOW ARE CONSIDERED IN COMPLIANCE UNLESS OTHERWISE MARKED WITH ONE OF THE FOLLOWING: V = VIOLATION A = AREA OF CONCERN NA = NOT APPLICABLE

PERMITS	V	A	NA	SPREADING/COMPACTING	V	A	NA	CONTROLS	V	A	NA
PRC 44004 - SIGNIFICANT CHANGE				20640 - SPREADING/COMPACTING				20840 - NOISE CONTROL			
PRC 44014(b) - OPERATOR COMPLIES				20650 - GRADING OF FILL SURFACES				20860 - TRAFFIC CONTROL			
with TERMS & CONDITIONS OF PERMIT				20660 - STOCKPILING				20870 - HAZARDOUS WASTES			
21640 - REVIEW OF PERMITS				<b>DAILY &amp; INTERMEDIATE COVER</b>				20880 - MEDICAL WASTES			
21600 - REPORT OF DISP SITE INFORMATION				20670 - AVAILABILITY COVER MATERIAL				20890 - DEAD ANIMALS			
<b>LOCATION RESTRICTIONS</b>				20680 - DAILY COVER				20900 - AIR CRITERIA			
20270 - AIRPORT SAFETY				20685 - PERFORMANCE STANDARDS				<b>GAS MONITORING &amp; CONTROL</b>			
<b>OPERATING CRITERIA</b>				20690 - (RESERVED)				20918 - EXEMPTIONS			
20510 - DISPOSAL SITE RECORDS				20700 - INTERMEDIATE COVER				20919 - GAS CONTROL			
20515 - MSWLF UNIT RECORDS				20701 - (RESERVED)				20919.5 - EXPLOSIVE GAS CONTROL			
20517 - DOCUMENT APPROVALS/REQUIREMENTS				<b>HANDLING, EQUIPMENT &amp; MAINTENANCE</b>				<b>CLOSURE</b>			
20520 - SIGNS				20710 - SCAVENGING/SALVAGING/STORAGE				21780 - SUBMITTAL CLOSURE PLANS			
20530 - SITE SECURITY				20720 - NON-SALVAGEABLE ITEMS				<b>TIRES</b>			
20540 - ROADS				20730 - VOLUME REDUCTION/ENERGY RECOVERY				17351 - FIRE PREVENTION			
20550 - SANITARY FACILITIES				20740 - EQUIPMENT				17352 - FACILITY ACCESS SECURITY			
20560 - DRINKING WATER SUPPLY				20750 - SITE MAINTENANCE				17353 - VECTOR CONTROL			
20570 - COMMUNICATIONS FACILITIES				<b>CONTROLS</b>				17354 - STORAGE			
20580 - LIGHTING				20760 - NUISANCE CONTROL				17355 - DISPOSAL			
<b>INEL</b>				20770 - ANIMAL FEEDING				17356 - INDOOR STORAGE			
20590 - PERSONNEL HEALTH & SAFETY				20780 - OPEN BURNING/BURNING WASTES				<b>OTHER</b>			
20610 - TRAINING				20790 - LEACHATE CONTROL							
20615 - SUPERVISION				20800 - DUST CONTROL							
20620 - SITE ATTENDANT				20810 - VECTOR AND BIRD CONTROL							
<b>CONFINED UNLOADING</b>				20820 - DRAINAGE/EROSION CONTROL							
20630 - CONFINED UNLOADING				20830 - LITTER CONTROL							

COMMENTS (USE SMS-03 FOR ADDITIONAL SPACE)

No violations observed.

**SCS FIELD SERVICES, INC.**

September 22, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the August 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, no methane gas was detected in any of the monitoring wells tested.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

  
James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
REP\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
1	08/04/98	ND	20.4	ND
1A	08/04/98	ND	18.4	-0.01
2	08/04/98	ND	18.4	ND
2A	08/04/98	ND	18.6	ND
3B	08/04/98	ND	19.2	-0.01
4	08/04/98	ND	19.1	0.01
4A	08/04/98	ND	18.6	0.02
5	08/04/98	ND	19.2	-0.02
5A	08/04/98	ND	19.1	-0.01
6B	08/04/98	ND	18.5	0.02
6C	08/04/98	ND	16.8	ND
6D	08/04/98	ND	18.3	-0.02
7	08/04/98	ND	20.4	ND
7A	08/04/98	ND	20.4	-0.02
8A	08/04/98	ND	17.5	ND
9	08/04/98	ND	15.1	ND
10	08/04/98	ND	19.1	ND
10A	08/04/98	ND	19.7	ND
11B	08/04/98	ND	20.2	-0.03
12B	08/04/98	ND	20.1	-0.01
13B	08/04/98	ND	20.2	-0.01
13D	08/04/98	ND	19.9	-0.02
13C	08/04/98	ND	20.2	ND
13X	08/04/98	ND	20.3	ND
14B	08/04/98	ND	20.4	0.06
14C	08/04/98	ND	20.4	ND

ND=None Detected

NT=Not Taken

%vol=Percent by Volume

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
15A	08/04/98	ND	20.4	0.08
16A	08/04/98	ND	15.7	-0.02
16X	08/04/98	ND	20.4	ND
17A	08/04/98	ND	14.6	ND
18B	08/04/98	ND	14.2	0.01
19	08/04/98	ND	18.3	ND
20	08/04/98	ND	17.6	0.01
20A	08/04/98	ND	17.0	0.01
22	08/04/98	ND	18.7	0.03
22A	08/04/98	ND	19.4	0.02
23	08/04/98	ND	20.3	0.04
24	08/04/98	ND	19.8	ND
24A	08/04/98	ND	18.9	0.01
25	08/04/98	ND	19.8	0.01
25A	08/04/98	ND	19.1	ND
26	08/04/98	ND	19.4	0.01
26A	08/04/98	ND	19.4	ND
26B	08/04/98	ND	19.2	ND
27	08/04/98	ND	20.1	ND
27A	08/04/98	ND	18.4	ND
28	08/04/98	ND	19.7	0.01
30A	08/04/98	ND	19.8	0.29
31	08/04/98	ND	19.5	0.04
31A	08/04/98	ND	17.8	0.04
32	08/04/98	ND	19.5	ND
32A	08/04/98	ND	19.5	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
33	08/04/98	ND	19.7	ND
34	08/04/98	ND	16.2	-0.02
35	08/04/98	ND	20.4	ND
36B	08/04/98	ND	18.4	ND
37	08/04/98	ND	18.2	-0.02
38	08/04/98	ND	20.3	ND
39	08/04/98	ND	20.4	0.06
40	08/04/98	ND	19.8	ND
41	08/04/98	ND	19.1	-0.01
42	08/04/98	ND	15.6	ND
43	08/04/98	ND	15.1	-0.03
45	08/04/98	ND	19.8	-0.04
46	08/04/98	ND	19.8	0.02
1B'	08/04/98	ND	20.2	-0.01
1C'	08/04/98	ND	20.1	-0.01
2B'	08/04/98	ND	20.4	ND
2C'	08/04/98	ND	19.5	ND
3B'	08/04/98	ND	19.7	ND
3C'	08/04/98	ND	20.2	ND
4B'	08/04/98	ND	19.8	ND
4C'	08/04/98	ND	19.4	ND
5B'	08/04/98	ND	19.5	ND
5C'	08/04/98	ND	20.1	ND
6B'	08/04/98	ND	19.2	0.01
6C'	08/04/98	ND	19.5	0.01
7B'	08/04/98	ND	18.2	ND

ND=None Detected  
%-vol=Percent by Volume

NT=Not Taken  
in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	08/04/98	ND	17.9	ND
8B'	08/04/98	ND	20.1	ND
8C'	08/04/98	ND	20.2	ND

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

October 21, 1998  
File No. 0789003.01

Mr. David L. Thompson  
City of Los Angeles  
Environmental Affairs Department  
201 N. Figueroa Street, Suite 200  
Los Angeles, California 90012

Subject: Landfill Gas (LFG) Related Issues at the Hewitt Pitt Landfill, North Hollywood, California

Dear Mr. Thompson:

In accordance with the request made in your February 1995 Inspection Report, enclosed is the September 1998 LFG Monitoring Well Data (Table 1) for the subject site. As you can see, no methane gas was detected in any of the monitoring wells tested.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

  
James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

MAB:vlt  
O:\COMMON\SCS\SLBREPT\0789003A

cc: George Cosby, Cal Mat



TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
-----	-----	-----	-----	-----
4'	09/01/98	ND	20.6	ND
1	09/01/98	ND	20.4	ND
1A	09/01/98	ND	17.9	ND
2	09/01/98	ND	18.9	ND
2A	09/01/98	ND	19.6	ND
3B	09/01/98	ND	12.0	ND
4	09/01/98	ND	20.5	ND
4A	09/01/98	ND	18.4	ND
5	09/01/98	ND	20.4	-0.02
5A	09/01/98	ND	20.4	ND
6B	09/01/98	ND	20.2	ND
6C	09/01/98	ND	17.3	0.01
6D	09/01/98	ND	19.6	ND
7	09/01/98	ND	20.4	0.10
7A	09/01/98	ND	20.4	ND
8A	09/01/98	ND	18.5	-0.02
9	09/01/98	ND	20.5	-0.01
10	09/01/98	ND	19.6	-0.01
10A	09/01/98	ND	20.3	-0.01
11B	09/01/98	ND	20.7	-0.02
12B	09/01/98	ND	20.6	ND
13B	09/01/98	ND	20.7	-0.01
13D	09/01/98	ND	20.7	ND
13C	09/01/98	ND	20.4	ND
13X	09/01/98	ND	20.7	ND
14B	09/01/98	ND	20.6	0.47

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
14C	09/01/98	ND	20.4	ND
15A	09/01/98	ND	20.6	0.01
16A	09/01/98	ND	13.9	-0.05
16X	09/01/98	ND	19.9	-0.01
17A	09/01/98	ND	13.6	-0.02
18B	09/01/98	ND	14.2	-0.02
19	09/01/98	ND	18.6	ND
20	09/01/98	ND	18.5	-0.01
20A	09/01/98	ND	17.7	-0.01
22	09/01/98	ND	18.6	ND
22A	09/01/98	ND	18.7	0.01
23	09/01/98	ND	20.0	0.23
24	09/01/98	ND	20.7	ND
24A	09/01/98	ND	20.1	ND
25	09/01/98	ND	20.7	-0.02
25A	09/01/98	ND	19.8	ND
26	09/01/98	ND	20.7	ND
26A	09/01/98	ND	20.7	ND
26B	09/01/98	ND	20.1	ND
27	09/01/98	ND	20.2	ND
27A	09/01/98	ND	18.8	ND
28	09/01/98	ND	19.7	ND
30A	09/01/98	ND	19.3	0.12
31	09/01/98	ND	20.4	0.02
31A	09/01/98	ND	18.7	ND
32	09/01/98	ND	20.6	ND

ND=None Detected  
 %-vol=Percent by Volume

NT=Not Taken  
 in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe -----	DATE -----	Methane [%vol] -----	Oxygen [%vol] -----	Pressure [inW.C.] -----
32A	09/01/98	ND	20.5	ND
33	09/01/98	ND	20.2	ND
34	09/01/98	ND	14.8	ND
35	09/01/98	ND	20.4	ND
36B	09/01/98	ND	15.3	0.01
37	09/01/98	ND	20.2	ND
38	09/01/98	ND	20.4	ND
39	09/01/98	ND	20.7	0.01
40	09/01/98	ND	20.7	ND
41	09/01/98	ND	17.2	0.01
42	09/01/98	ND	19.9	ND
43	09/01/98	ND	2.4	-0.03
45	09/01/98	ND	19.3	-0.01
46	09/01/98	ND	20.3	0.01
1B'	09/01/98	ND	20.4	ND
1C'	09/01/98	ND	20.7	ND
2B'	09/01/98	ND	20.3	ND
2C'	09/01/98	ND	20.7	ND
3B'	09/01/98	ND	20.7	ND
3C'	09/01/98	ND	20.7	-0.01
4B'	09/01/98	ND	19.3	-0.01
5B'	09/01/98	ND	20.6	-0.02
5C'	09/01/98	ND	20.5	-0.02
6B'	09/01/98	ND	19.5	ND
6C'	09/01/98	ND	20.6	-0.01
7B'	09/01/98	ND	18.5	ND

ND=None Detected  
 %-vol=Percent by Volume

NT=Not Taken  
 in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [inW.C.]
7C'	09/01/98	ND	19.0	ND
8B'	09/01/98	ND	18.7	-0.02
8C'	09/01/98	ND	20.6	-0.01

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

February 24, 1995

Mr. George Cosby  
**CALMAT PROPERTIES**  
3200 San Fernando Road  
Los Angeles, California 90065



**PROJECT: Design and Construction of a Landfill Gas Condensate Water  
Collection and Disposal System; GCE Proposal No. 95-109 Rev. 1**

Dear George:

I have revised this proposal based on our meeting on February 24. The revisions include a 1000 gallon condensate water holding tank, engineering for the SCAQMD permit for the larger tank, and a spare spray nozzle for the flare. The proposal still describes the four work phases, however the attached contract is only for phases 1 and 2 for the flare station water combustion system engineering and permitting.

**Phase 1:** This includes the initial engineering for the condensate disposal system located in the flare station. This includes the water spray system, 1000 gallon condensate water holding tank with secondary containment, controls, piping and other appurtenances. This Phase also includes the SCAQMD permitting for the condensate water disposal system. It is recommended that the permit include potential field work described in Phase 3 and 4 of this proposal.

**Phase 2:** This includes the construction of the condensate water disposal system located in the Hewitt flare station. This phase also includes the spare spray nozzle for the flare.

**Phase 3: (Future Work)** This includes engineering the condensate water collection system from the landfill. This will include designs to retrofit the drain sumps, piping and connection to the flare station. To avoid duplicate SCAQMD permit costs, the SCAQMD permitting for this Phase are included in the Phase 1 work.

**Phase 4: (Future Work)** This includes the construction of the condensate water collection system designed in Phase 3.

## **BACKGROUND**

The Regional Water Quality Control Board has severely limited the conditions under which condensate water can be returned to a landfill. It is our understanding that CalMat

*1205 North Red Gum Street, Suite B, Anaheim, California 92806*  
*(714) 632-9969 Fax: (714) 632-9968*

Mr. George Cosby  
February 24, 1994

wants to avoid the disposal of condensate water in this manner. The disposal method addressed by this proposal is to combust the water and associated organics in the Hewitt landfill gas flare. This method of condensate water disposal should have a limited impact on the flare operation provided sufficient methane gas is available. Preliminary calculations performed by GCE and previously submitted to CalMat indicate that disposal in this manner should not cause flare temperature problems. In later years of the flare system operation, additional modifications may be required to improve the heat efficiency of the disposal system. These modifications are not required nor recommended at this time.

## **PROPOSED CONDENSATE DISPOSAL SYSTEM DESCRIPTION**

The proposed condensate collection and disposal system would consist of several components (listed below) to collect condensate water and spray it into the flare. The spray nozzle used in this system will be provided by Perennial Energy. They have designed and installed spray systems on their own flares as well as John Zink flares similar to the one installed at Hewitt. The system described here is conceptual in nature since detailed design has not been completed.

**Design Plans and Specifications:** The proposal includes design plans sufficient for the construction of the water disposal system. Special provision specifications for the system will not be prepared, and the system construction will not be bid.

**Condensate holding tank:** A 1000 gallon poly tank will be installed at the Flare Station. The concrete foundation for the tank will include secondary containment. All condensate water will be collected in this tank. Because the tank is larger than 250 gallons, a separate SCAQMD permit will be required. We have included the engineering for the permit preparation, however the actual SCAQMD fee is not included. Condensate water from the landfill and condensate water from the flare station separator will be pumped to the poly tank.

**Flare Modifications:** The method of condensate disposal will consist of an air atomized spray system. The spray nozzle selected for this project will be supplied by Perennial Energy. This system is only limited by the ability to add sufficient heat to the condensate to evaporate it. It is anticipated that water injection up to 1 GPM could be added without impacting the flare performance.

**Control System:** The control system will include equipment necessary to control the water spray into the flare. The control components include a motor starters for the air compressor and a pneumatic water pump solenoid valve. It also includes connection to the existing temperature controller and the annunciator, high liquid level controller in the condensate tank, a timer, and the necessary switches and lights needed to control the system.

**Process Controls:** The condensate water disposal system will require its own control system. Several permissive conditions will need to exist before the water spray system will start. First the flare must be operational and above its low shutdown temperature (1400 deg F.). Second the water level in the tank must be sufficiently high for the water pump to run. While this is a simple system to implement, it does not allow a buffer between the flare shutdown temperature and the permissive temperature for the water injection system. Therefore, it is possible that the flare may operate at a lower than normal temperature while the spray system is operating. Included in this proposal is a cycle timer to avoid "fast cycle" operation of the spray system. This will hold the spray system off for 10 minutes after a low temperature condition is experienced. This is to allow the flare system to stabilize prior to injecting water.

**Air Compressor:** An air compressor will be installed in the flare station. The proposed location for this equipment is within the electrical shed. It is estimated that the compressor will be 5 hp.

## **PROJECT TEAM AND PERSONNEL**

Gas Control Engineering has an exceptionally talented staff of engineers and field technicians. Our team is amongst the best ever assembled to do landfill system design work. Mr. Prosser, President of GCE will be the project manager on this work. Flare station design modifications will be engineered by Mr. Kirk Hein, PE under Mr. Prosser's direction. Mr. Hein is very familiar with this type of work having owned and operated a custom fabrication shop prior to becoming a professional engineer. Mr. Alan Janecek, PE, will design the field collection system included in the optional work. Mr. Janecek has extensive experience working on 17 landfills in Riverside County. Because he was responsible for the operation of gas and liquid systems at these sites, Mr. Janecek was acutely aware of the need for reliable, cost-effective systems. Mr. Janecek has worked with both vacuum and pump collection systems and knows the advantages and disadvantages of each.

RTB Construction will work with GCE on this project. RTB personnel have been constructing LFG systems since 1980. They are thoroughly familiar with all aspects of field construction and are among the most qualified construction firms in California. They have an excellent reputation in the construction industry. Mr. Dick Prosser and Mr. Don Brookshire, the Responsible Managing Officer of RTB first worked together in 1980 on a landfill project in Wilmington, California. GCE is confident that CalMat will find the work performed by GCE and RTB to be exceptional.

## **SCOPE OF WORK**

This section describes the work that will be performed for this project. Only phases 1 and 2 work are included in this proposal. Additional phases may be authorized by CalMat in the future.

### **Phase 1: Flare Station Design Modifications and SCAQMD Permits**

- Task 1.1: Review background information on the Hewitt landfill -- Under this task, GCE will review the proposed design concept based on information collected at the landfill. Information required includes the rate of condensate water generation within the gas collection system and at the flare station, and verification of the LFG flow rate. The location of the proposed equipment within the flare station will also be verified.
- Task 1.2: Prepare and submit to CalMat preliminary system design drawings -- GCE will prepare drawings showing the proposed water spray system. These drawings will be used for CalMat approval and submission to SCAQMD as part of the permit process.
- Task 1.3: Prepare process calculations -- GCE will finalize process calculations needed for the SCAQMD permit submittal.
- Task 1.4: Prepare and submit to SCAQMD permit applications for the system modifications -- GCE will prepare the forms necessary to obtain the SCAQMD permit to construct for the flare modification and the condensate tank. It is assumed that health risk assessment will not be required for this project and is not included as a work item. Condensate water sampling and analysis is not included in this scope of work. If SCAQMD requires this analysis it will be performed as an optional task.
- Task 1.5: Prepare detailed plans and specifications for the system -- GCE will complete the design drawings needed to build the system. This will also include specification sheets for critical components of the system.
- Task 1.6: Confirm field construction costs with CalMat -- Following the completion of the detailed design work, GCE will confirm the project construction costs. The purpose of this work is to confirm the phase 2 construction budget. Should the design concepts change, then the construction costs may also change. Costs may either increase, decrease or remain the same.

### **Phase 2: Construction of the Flare Station Design Modifications**

- Task 2.1: Procure materials -- GCE will work with RTB Construction on this project. Under this task GCE and/or RTB will procure materials for the project.

- Task 2.2: Construct the System -- The flare system modifications will be implemented. This will include the installation of the condensate water holding tank, the flare station piping, the pumps and the system controls.
- Task 2.3: Perform Construction Observation -- GCE will work with the field contractor to verify that the system is installed according to the designs. This work will be conducted by one of GCE's engineers under the supervision of Mr. Prosser.
- Task 2.4: Start the modified system -- Mr. Prosser will start the completed condensate incineration system and provide training to CalMat personnel.
- Task 2.5: Perform Flare Source Testing (If required by SCAQMD) -- Source testing is not included in this work scope. This Task is shown as an option if it is required as a condition on the permit to construct.
- Task 2.6: Submit information to SCAQMD and request the permit to operate -- GCE will submit a request to SCAQMD for the issuance for the permit to operate for the new system. If it is anticipated that the condensate water from the field will also be collected then it is recommended that the submission of this request be delayed pending completion of this work phase.
- Task 2.7: Prepare an O&M Manual on the implemented system -- GCE will prepare a description of the condensate system operation. This will also include operation and maintenance literature on the components installed in the system.

### **Phase 3 Condensate Water Collection System Design (Future work)**

- Task 3.1: Obtain detailed information on the location of the condensate water collection drains -- The locations are essential to determine the pipe necessary to connect all of the sumps.
- Task 3.2: Design condensate sump retrofits -- This design will include the sealing of the condensate water sumps and installation of collection components. Included in this proposal is the installation of a plastic boot within the existing sump. The sumps will reuse the drain trap assemblies currently installed within them. Also installed within the sumps will be the collection component for the water system. This will consist of a pneumatic pump. Modifications to the well lateral pipes are not included in the scope of work.
- Task 3.3: Design the condensate water collection header system -- The condensate water will be transported to the flare station through HDPE pipe. The pipe will be installed adjacent to the existing LFG header. Expansion loops will be installed on an as-required basis to allow for thermal expansion and contraction of the condensate water pipe.

Task 3.4: Design the Compressed Air Distribution system -- A steel compressed air pipe will run parallel to the condensate water pipe and will be connected at the flare station.

**Phase 4: Construction of the Condensate Water Collection System (Future work)**

Task 4.1: Procure materials -- GCE will work with RTB Construction on this project. Under this task either GCE or RTB will procure materials for the project.

Task 4.2: Construct the System -- The field collection system modifications will be implemented. This will include retrofitting the condensate water drains, installation of the liquid gathering pipe and air pipe, and connection to the flare station.

Task 4.3: Perform Construction Observation -- GCE will work with the field contractor to verify that the system is installed according to the designs. This work will be conducted by one of GCE's engineers under the supervision of Mr. Prosser.

Task 4.4: Start the modified system -- Mr. Prosser will start the completed condensate collection system and provide training to CalMat personnel.

Task 4.5: Prepare an O&M Manual on the implemented system -- GCE will prepare a description of the condensate system operation. This will also include operation and maintenance literature on the components installed in the system.

**PROJECT SCHEDULE**

The proposed work will be performed in several work phases as described below. The schedule is approximate and is subject to change. The factor that will have the greatest impact on the proposed schedule is the time required by SCAQMD to issue the permit to construct.

MONTH	1	2	3	4	5	6
<b>Phase 1: Flare Station Design Modifications and SCAQMD Permits</b>						
Task 1: Review background information on the Hewitt landfill	xx					
Task 2: Prepare and submit to CalMat preliminary system design drawings -- GCE will prepare concept drawings. These drawings will be used for CalMat approval and submission to SCAQMD as part of the permit process.	xxxx					
Task 3: Prepare process calculations	xxxx					
Task 4: Prepare and submit to SCAQMD permit application for the system modifications		xxxx	xxxx	xxxx	xxxx	
Task 5: Prepare detailed plans and specifications for the system	xxxx					
Task 6: Confirm field construction costs with CalMat		x				x
<b>Phase 2: Construction of the Flare Station Design Modifications</b>						
Task 1: Procure materials						xx
Task 2: Construct the System						xxxx
Task 3: Perform Construction Observation						xxxx
Task 4: Start the modified system						x
Task 5: Perform Flare Source Testing (If required by SCAQMD)						→
Task 6: Submit information to SCAQMD and request the permit to operate						→
Task 7: Prepare an O&M Manual on the implemented system		xx				xx

## PROJECT COSTS

The costs for Phase 1 of this project will be performed on a fixed firm-price basis except as limited in this proposal. The costs for Phase 2 work are preliminary and are based on numerous assumptions. Provided the systems are similar to that described in this proposal, these costs should remain constant. These costs are based on unit prices that are included in the Table of Project Costs shown below. The total estimated cost for GCE labor, materials and Construction by RTB for Phases 1 and 2 work, is \$41,186. Spreadsheets showing a further breakdown of labor and materials are also attached. Design changes required because of changes in conditions or requested by CalMat may cause a difference in the total system cost. GCE used this approach to provide CalMat

Mr. George Cosby  
February 24, 1994

with the lowest possible priced system. This allows us to remove contingencies that would increase the price to CalMat.

**Table of Project Costs**

<b>Phase</b>	<b>GCE</b>	<b>Construction</b>
<b>Phase 1:</b> Flare Station Design Modifications and SCAQMD Permits	\$10,328	\$0
<b>Phase 2:</b> Construction of the Flare Station Design Modifications	4,046	26,812
<b>Phase 3:</b> Condensate Water Collection System Design (Future Work) (1)	5,294	0
<b>Phase 4:</b> Construction of the Condensate Water Collection System (Based on 15 sump conversions and 3800 feet of collection header) (Future Work) (1)	3,156	86,289

(1) Costs are to be confirmed

## **AUTHORIZATION**

We have attached two copies of a Contract as attachment 1 to this proposal for your use in authorizing this work. Signed and returned copies will be our authorization to proceed. We will return an executed copy to you for your records.

## **LIMITATIONS**

Although Gas Control Engineering will take steps to help ensure that the submitted information will be acceptable to the District, regulatory interpretations and District policies are continually changing. Therefore, it is possible that the District may have format or technical comments on the submitted documents. We have allotted 4 hours in the budget to respond to these questions. However, if this amount of time is not sufficient, we will promptly notify CalMat and request appropriate budget revisions.

The installation of this work will probably require SCAQMD permits for both the liquid collection system, the flare modifications and the condensate water tank. The SCAQMD permitting fees are estimated at \$6,900. This fee is not included in the proposed costs.

Information gathered during the project by Gas Control Engineering is considered confidential and will be released only upon written authorization of CalMat or as required by law. California law requires a person to inform the State if a situation is encountered that can be considered an immediate endangerment to the public's health or welfare and/or the environment.

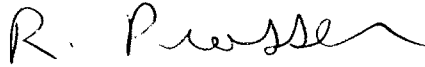
Mr. George Cosby  
February 24, 1994

The design work prepared under this scope of work will be consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in Southern California. No warranty is expressed or implied.

This proposal is the property of Gas Control Engineering, Inc. and may be used only by the Client and only for the purposes stated, within a reasonable time from its issuance.

We would very much like to work with CalMat on this project and look forward to discussing it with you in more detail. Thank you for this opportunity to propose these services to CalMat.

Sincerely,  
**Gas Control Engineering**

A handwritten signature in cursive script, appearing to read "R. Prosser", with a long horizontal flourish extending to the right.

Richard W. Prosser, P.E.  
President

RWP/JHW/cw

Enclosures

**Agreement Between CalMat Properties and  
Gas Control Engineering, Inc.  
for a Unit Price Project**

This **AGREEMENT** is entered into this 24th day of February, 1995, between **CALMAT PROPERTIES (CALMAT)**, 3200 San Fernando Road, Los Angeles, California 90065 and **GAS CONTROL ENGINEERING, INC. (GCE)**, 1205 North Red Gum Street, Suite B, Anaheim, California 92806.

The Parties agree as set forth below.

1. **The Project is: Design and Construction of a Landfill Gas Condensate Water Collection and Disposal System;** GCE Proposal No. 95-109-Rev. 1 dated February 24, 1995 and included as part of this contract.
2. **SCHEDULE AND TERM:** GCE shall complete all work under this contract per the time schedule indicated in the proposal No. 95-109-Rev. 1 dated February 24, 1995 and included as part of this contract.
3. **COMPENSATION:** The compensation to GCE for providing the services set forth herein shall not exceed Forty One Thousand One Hundred Eighty-Six Dollars (\$41,186) without the prior written consent of CalMat Properties. Work shall be done on a unit cost basis. Unit costs are included on the cost sheets attached to this Proposal. Extra work performed by GCE shall be compensated at the rates indicated on Attachment 2.
4. **PAYMENT SCHEDULE:**
  - 4.1. The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.
  - 4.2. Applications for Payment shall indicate the percentage of completion of each portion of the work as of the end of the period covered by the Application for Payment.
  - 4.3. The value of the Work completed shall be calculated by multiplying the percent of project completion times the unit value of the Work completed.
  - 4.4. CalMat shall make periodic payments within thirty (30) days of receiving and approving a billing statement in proportion to the satisfactory completion of GCE's services. GCE reserves the right to stop work for non-payment.
  - 4.5. Final Payment constituting the entire unpaid balance of the Contract Sum shall be made by CalMat to GCE when the Contract has been fully performed by GCE except for GCE's responsibility to correct nonconforming Work.
5. **FINANCE CHARGES:** Invoices will be issued on a monthly basis, or upon completion of a project, whichever is sooner. The net cash amount of this invoice is payable on presentation of the invoice. If not paid within 30 days after the date of the invoice, the unpaid balance shall be subject to **FINANCE CHARGE** of 1.5% per month, which is an **ANNUAL PERCENTAGE RATE** of 18%.

6. **TERMINATION:** This Agreement may be terminated at any time by either party providing ten days advance written notice is given. In the event of termination, GCE will be compensated for services performed up to the date of termination which have been accepted by CalMat Properties.
7. **LIABILITY:** GCE shall, at no cost to CalMat, re-perform engineering services which fail to satisfy the standard of care for professionals normally practicing in Southern California performing this type of work, for the work provided.
8. **WARRANTEE:** All services provided by GCE shall be warranted for a period of 1 year following installation and/or project completion.
9. **CONFIDENTIALITY:** Information gathered during the project with GCE is considered confidential and will be released only upon written authorization by GCE or as required by law.
10. **INSURANCE:** GCE shall maintain General Liability insurance in the amount of 1 Million Dollars (\$1,000,000). GCE shall comply with Workers Compensation insurance laws.
11. **AMENDMENT:** This Agreement may be amended only by written instrument signed by both parties.
12. **INCONSISTENT TERMS:** If the attachments or exhibits to this Agreement, if any, are inconsistent with this Agreement, this Agreement shall control.

IN WITNESS WHEREOF, the Agreement is executed by CalMat Properties and by Gas Control Engineering, Inc.

**CalMat Properties**  
3200 San Fernando Road  
Los Angeles, California 90065

By: \_\_\_\_\_

George Cosby  
Vice-President

\_\_\_\_\_  
Date

**Gas Control Engineering, Inc.**  
1205 North Red Gum, Suite B  
Anaheim, California 92806

By: R. Prosser

Richard W. Prosser  
President

FEB 24, 1995  
Date

# GAS CONTROL ENGINEERING, INC.

## 1995 BASIS OF CHARGES

1. Listed herein are typical prices for services most frequently performed by Gas Control Engineering, Inc. Prices for other services not listed will be given upon request.
2. Invoices will be issued on a monthly basis, or upon completion of a project, whichever is sooner. The net cash amount of this invoice is payable on presentation of the invoice. If not paid within 30 days after the date of the invoice, the unpaid balance shall be subject to a FINANCE CHARGE of 1.5% per month, which is an ANNUAL PERCENTAGE RATE of 18%.
3. For hourly workers, time worked in excess of eight hours per day and weekend work will be charged at 1.5 times the hourly rate.
4. Per diem will be charged at a rate of \$75 per day per person or expenses plus 15%, whichever is greater. Per diem will be charged for all projects in excess of 50 miles from the Gas Control Engineering, Inc. office.
5. Outside services will include a 15% markup unless otherwise noted.
6. We are protected by Worker's Compensation Insurance, and will furnish certificates thereof upon request. We assume the risk of damage to our own supplies and equipment. If your contract or purchase order places greater responsibilities upon us or requires further insurance coverage, GCE will, when specifically directed by you, take out additional insurance (if procurable) to protect us at your expense, but we shall not be responsible for property damage from any cause, including fire and explosion, beyond the amounts of coverage of our insurance.
7. All environmental samples may be returned to clients at Gas Control Engineering, Inc.'s discretion 30 days after submission of final report, unless prior arrangements are made.
8. Proper disposal or handling of soil boring cuttings, well development and purge waters, decontamination solutions, and other contaminated/potentially contaminated materials is the responsibility of the client. Gas Control Engineering, Inc. can provide containers for on-site containment and can advise the client regarding proper handling procedures.
9. Expert witness and preparation at two times the regular fee.

## FEE SCHEDULE

Principal Engineer	\$108
Senior Professional	87
Staff Professional	76
Assistant Professional	55
Designer	48
Technician	39
Word Processing/Clerical	38
Engineering Assistant	37
Geologist Assistant	26
Mileage	\$0.35/mi.
Copies	\$0.10 each
Drawing Copies	\$2.50 each

GCE design costs for the Calmat landfill condensate water disposal system								
	2/25/95	Prosser	Senior Engineer	Project Engineer	Designer	WP/Clerical	Expenses	Total
		108	87	55	48	38	1	
Phase 1:	Flare Station Design Modifications and SCAQMD Permits							
Task 1:	Review background information	8	0	0	0		42	906
Task 2:	Preliminary system design drawings	4	4	0	20			1740
Task 3:	Process calculations	1	6	0	0		0	630
Task 4:	SCAQMD permit application	2	16	8	0		0	2048
Task 5:	Plans and specifications	4	16	16	40	10	0	5004
Task 6:	Construction Costs Estimate	0	0	0	0	0	0	0
								10328
Phase 2:	Construction of the Flare Station Design Modifications							0
Task 1:	Procure materials	0	0	0	0	0	0	0
Task 2:	Construct the System	0	0	0	0	0	0	0
Task 3:	Construction Observation	0	0	0	0	0	0	0
Task 4:	System Start-up	16	0	0	0	0	0	1728
Task 5:	Flare Source Testing (Optional)	0	0	0	0	0	0	0
Task 6:	SCAQMD permit to operate	1	6	0	0	4	0	782
Task 7:	O&M Manual	2	8	4	0	8	100	1536
								4046
Phase 3	Condensate Water Collection System Design							0
Task 1:	Obtain site information	2	0	0	0	0	0	216
Task 2:	Obtain a digital map of the Hewitt landfill	0	0	0	0	0	0	0
Task 3:	Design condensate sump retrofit	1	3	0	8	0	0	753
Task 4:	Condensate water collection header syste	1	3	8	40	2	0	2805
Task 5:	Compressed Air Distribution system desig	1	4	4	16	2	0	1520
								5294
Phase 4:	Construction of the Condensate Water Collection System							0
Task 1:	Procure materials	0	0	0	0	0	0	0
Task 2:	System Construction							0
Task 3:	Construction Observation							0
Task 4:	System Start up	16	0	0	0	0	0	1728
Task 5:	O&M Manual	1	8	4		8	100	1428
								3156
	Totals	60	74	44	124	34	242	22824

Condensate Water Collection and Disposal					
Preliminary Cost Estimate for Hewitt Landfill					
Prepared by RWP					
02/25/95					
ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	TOTAL COST
<b>Phase 2 flare station construction</b>					
1	Condensate Tank (250 gal poly tank)	1	LS	\$4,110.75	\$4,110.75
2	Air Compressor (5HP)	1	LS	\$3,517.50	\$3,517.50
3	Limit Switches	1	LS	\$1,753.50	\$1,753.50
4	Control Panel	1	LS	\$2,115.75	\$2,115.75
5	Injection Pump	1	LS	\$1,674.75	\$1,674.75
6	Electrical installation	1	LS	\$2,982.00	\$2,982.00
7	Flare Station Piping	1	LS	\$1,890.00	\$1,890.00
8	Flare Modifications	1	LS	\$4,725.00	\$4,725.00
9	Spare Spray Nozzle	1	Each	\$1,575.00	\$1,575.00
10	24 V power supply	1	LS	\$577.50	\$577.50
11	Concrete Foundation	1	LS	\$1,890.00	\$1,890.00
					<b>\$26,811.75</b>
<b>Phase 4 field construction</b>					
1	Sump Retrofit 10" HDPE pipe boot	15	EA	\$1,531.95	\$22,979.25
2	Solenoid valve (24 volt with timer)	15	EA	\$840.00	\$12,600.00
3	Air silencer	15	EA	included	
4	Geoguard Bladder Pump 1.5"/44" SS	15	EA	\$1,349.25	\$20,238.75
5	foot screen included with pump	15	EA	included	
6	air valve (1/4")	15	EA	included	
7	liquid valve (1/2")	15	EA	included	
8	Condensate Header (Above Grade)	3800	LF	\$2.89	\$10,972.50
9	Misc. Air Valves	5	EA	\$168.00	\$840.00
10	Misc. Liquid Valves	5	EA	\$220.50	\$1,102.50
11	Compressed Air line 1" galv. steel	3800	LF	\$3.05	\$11,571.00
12	Elect. Wiring (on grade 12v dc wire)	3800	LF	\$1.58	\$5,985.00
					<b>\$86,289.00</b>
<b>Optional Work</b>					
1	Condensate Sampling and Analysis	1	LS	TBD	TBD
2	Source Testing	1	LS	\$10,000.00	\$10,000.00
	<b>TOTAL</b>				<b>\$10,000.00</b>





## INTER OFFICE MEMORANDUM

TO: Scott Wilcott  
FROM: George Cosby  
SUBJECT: METHANE GAS SYSTEM 7245 Laurel Canyon Boulevard

DATE: March 13, 1995

The intent of this memo is to provide information needed to be in compliance for condensate collected at the Hewitt Landfill site. Currently, we operate a self storage and land rental facility at 7245 Laurel Canyon Boulevard, North Hollywood, California. This property was purchased in 1903. Under the Consumers Rock Co., later merged into Consolidated Rock Co., excavation of the property took place and material was railed into Los Angeles. The material mined was primarily sand. The plant stopped operation in the 1969/1976 era. About 1972 a contract was let to L.A. By Products Co. to fill the site with household rubbish. This procedure took place until 1977. While the process of filling was going on, any dirt that was left on the slopes for setbacks etc. was taken for daily cover. This made the site like a large box with no side wall protection nor any protection at the bottom for seepage. When the time came for surcharge of the rubbish, L.A. By Products did not want to continue paying royalty. Therefore, Conrock terminated the contract. The site remained open for a few years. CalMat spent large amounts of money for settlement and installation of a methane gas system. When I took over the site in 1981, I closed and stopped all operations. Two years later we were able to get a large contractor to bring in half million yards of dirt free to fill the site and bring it into some reasonable compliance. In 1985 we started a self storage company with R.V. parking and land rental. Today we are operating a self storage and R.V. storage with 96% occupancy and 22 acres of land rented. We currently signed a 10 year lease with two five-year options. We also have a three year contract with Desmond Studios for 8.5 acres of land.

This 57 acre site has an additional 5 acres that could be leased, however, it is zoned R-1, therefore, it would be difficult and costly to develop and not worth the effort.

The sites this year will generate some \$960,000 in revenue from self storage and land rentals. The site will show some \$500,000 in net profit at year end.

The largest operating cost of the site is controlling methane gas. \$60,000 dollars was budgeted this year for annual maintenance work. Some \$3,500 per month is spent on monitoring of the methane gas. This gas is volatile and can be explosive if allowed to build up.

A covenant placed against the Hewitt Landfill in 1979 says that CalMat must maintain the property in compliance with current laws or the property would be taken over and maintained.

However, currently and for the past 10 years, we have had no problems with methane gas moving away from the site. We do have major residential housing built up against our property line. CalMat fought against the building of these residential units, however, we lost. Current law prohibits building and all buildings must be 2,000 ft away from any landfill site.

To further our efforts and be in compliance, condensate must be trucked off the site or treated. Recently a new option of spraying the condensate across the flare which is used for burning off the methane gas has been accepted by AQMD. This is a good option for CalMat.

Therefore, the expenditure for installation of this system is requested. The total cost for installation of this system will be as follows:

Installation of Flare Spray Unit	\$ 50,000
Monitoring Flare Test	\$ 12,000
Field Installation	\$150,000
AQMD Permits	\$ 10,000
Engineering Costs	\$ 50,000
Consultant Water Board	\$ 20,000
Motor Change-Out	\$ 10,000
	<b>\$302,000</b>
Budgeted	\$ 60,000
Non Budgeted	\$232,000

The work would start, with request of AQMD Permits, in the April/May period with actual construction work starting in June finishing in late September.

/oc

COS\METHGASS



## INTER OFFICE MEMORANDUM

TO: Scott Wilcott  
FROM: George Cosby  
SUBJECT: METHANE GAS SYSTEM 7245 Laurel Canyon Boulevard

---

DATE: March 13, 1995

The intent of this memo is to provide information needed to be in compliance for condensate collected at the Hewitt Landfill site. Currently, we operate a self storage and land rental facility at 7245 Laurel Canyon Boulevard, North Hollywood, California. This property was purchased in 1903. Under the Consumers Rock Co., later merged into Consolidated Rock Co., excavation of the property took place and material was railed into Los Angeles. The material mined was primarily sand. The plant stopped operation in the 1969/1976 era. About 1972 a contract was let to L.A. By Products Co. to fill the site with household rubbish. This procedure took place until 1977. While the process of filling was going on, any dirt that was left on the slopes for setbacks etc. was taken for daily cover. This made the site like a large box with no side wall protection nor any protection at the bottom for seepage. When the time came for surcharge of the rubbish, L.A. By Products did not want to continue paying royalty. Therefore, Conrock terminated the contract. The site remained open for a few years. CalMat spent large amounts of money for settlement and installation of a methane gas system. When I took over the site in 1981, I closed and stopped all operations. Two years later we were able to get a large contractor to bring in half million yards of dirt free to fill the site and bring it into some reasonable compliance. In 1985 we started a self storage company with R.V. parking and land rental. Today we are operating a self storage and R.V. storage with 96% occupancy and 22 acres of land rented. We currently signed a 10 year lease with two five-year options. We also have a three year contract with Desmond Studios for 8.5 acres of land.

This 57 acre site has an additional 5 acres that could be leased, however, it is zoned R-1, therefore, it would be difficult and costly to develop and not worth the effort.

The sites this year will generate some \$960,000 in revenue from self storage and land rentals. The site will show some \$500,000 in net profit at year end.

The largest operating cost of the site is controlling methane gas. \$60,000 dollars was budgeted this year for annual maintenance work. Some \$3,500 per month is spent on monitoring of the methane gas. This gas is volatile and can be explosive if allowed to build up.

A covenant placed against the Hewitt Landfill in 1979 says that CalMat must maintain the property in compliance with current laws or the property would be taken over and maintained.

However, currently and for the past 10 years, we have had no problems with methane gas moving away from the site. We do have major residential housing built up against our property line. CalMat fought against the building of these residential units, however, we lost. Current law prohibits building and all buildings must be 2,000 ft away from any landfill site.

To further our efforts and be in compliance, condensate must be trucked off the site or treated. Recently a new option of spraying the condensate across the flare which is used for burning off the methane gas has been accepted by AQMD. This is a good option for CalMat.

Therefore, the expenditure for installation of this system is requested. The total cost for installation of this system will be as follows:

Installation of Flare Spray Unit	\$ 50,000
Monitoring Flare Test	\$ 12,000
Field Installation	\$150,000
AQMD Permits	\$ 10,000
Engineering Costs	\$ 50,000
Consultant Water Board	\$ 20,000
Motor Change-Out	\$ 10,000
	<b>\$302,000</b>
Budgeted	\$ 60,000
Non Budgeted	\$232,000

The work would start, with request of AQMD Permits, in the April/May period with actual construction work starting in June finishing in late September.

/oc  
COS\METHGASS



## INTER OFFICE MEMORANDUM

TO: Scott Wilcott  
FROM: George Cosby  
SUBJECT: METHANE GAS SYSTEM 7245 Laurel Canyon Boulevard

---

DATE: March 13, 1995

The intent of this memo is to provide information needed to be in compliance for condensate collected at the Hewitt Landfill site. Currently, we operate a self storage and land rental facility at 7245 Laurel Canyon Boulevard, North Hollywood, California. This property was purchased in 1903. Under the Consumers Rock Co., later merged into Consolidated Rock Co., excavation of the property took place and material was railed into Los Angeles. The material mined was primarily sand. The plant stopped operation in the 1969/1976 era. About 1972 a contract was let to L.A. By Products Co. to fill the site with household rubbish. This procedure took place until 1977. While the process of filling was going on, any dirt that was left on the slopes for setbacks etc. was taken for daily cover. This made the site like a large box with no side wall protection nor any protection at the bottom for seepage. When the time came for surcharge of the rubbish, L.A. By Products did not want to continue paying royalty. Therefore, Conrock terminated the contract. The site remained open for a few years. CalMat spent large amounts of money for settlement and installation of a methane gas system. When I took over the site in 1981, I closed and stopped all operations. Two years later we were able to get a large contractor to bring in half million yards of dirt free to fill the site and bring it into some reasonable compliance. In 1985 we started a self storage company with R.V. parking and land rental. Today we are operating a self storage and R.V. storage with 96% occupancy and 22 acres of land rented. We currently signed a 10 year lease with two five-year options. We also have a three year contract with Desmond Studios for 8.5 acres of land.

This 57 acre site has an additional 5 acres that could be leased, however, it is zoned R-1, therefore, it would be difficult and costly to develop and not worth the effort.

The sites this year will generate some \$960,000 in revenue from self storage and land rentals. The site will show some \$500,000 in net profit at year end.

The largest operating cost of the site is controlling methane gas. \$60,000 dollars was budgeted this year for annual maintenance work. Some \$3,500 per month is spent on monitoring of the methane gas. This gas is volatile and can be explosive if allowed to build up.

A covenant placed against the Hewitt Landfill in 1979 says that CalMat must maintain the property in compliance with current laws or the property would be taken over and maintained.

However, currently and for the past 10 years, we have had no problems with methane gas moving away from the site. We do have major residential housing built up against our property line. CalMat fought against the building of these residential units, however, we lost. Current law prohibits building and all buildings must be 2,000 ft away from any landfill site.

To further our efforts and be in compliance, condensate must be trucked off the site or treated. Recently a new option of spraying the condensate across the flare which is used for burning off the methane gas has been accepted by AQMD. This is a good option for CalMat.

Therefore, the expenditure for installation of this system is requested. The total cost for installation of this system will be as follows:

Installation of Flare Spray Unit	\$ 50,000
Monitoring Flare Test	\$ 12,000
Field Installation	\$150,000
AQMD Permits	\$ 10,000
Engineering Costs	\$ 50,000
Consultant Water Board	\$ 20,000
Motor Change-Out	\$ 10,000
	<b>\$302,000</b>
Budgeted	\$ 60,000
Non Budgeted	\$232,000

The work would start, with request of AQMD Permits, in the April/May period with actual construction work starting in June finishing in late September.

/oc  
COS\METHGASS



February 24, 1995

Mr. George Cosby  
**CALMAT PROPERTIES**  
3200 San Fernando Road  
Los Angeles, California 90065



**PROJECT: Design and Construction of a Landfill Gas Condensate Water  
Collection and Disposal System; GCE Proposal No. 95-109 Rev. 1**

Dear George:

I have revised this proposal based on our meeting on February 24. The revisions include a 1000 gallon condensate water holding tank, engineering for the SCAQMD permit for the larger tank, and a spare spray nozzle for the flare. The proposal still describes the four work phases, however the attached contract is only for phases 1 and 2 for the flare station water combustion system engineering and permitting.

**Phase 1:** This includes the initial engineering for the condensate disposal system located in the flare station. This includes the water spray system, 1000 gallon condensate water holding tank with secondary containment, controls, piping and other appurtenances. This Phase also includes the SCAQMD permitting for the condensate water disposal system. It is recommended that the permit include potential field work described in Phase 3 and 4 of this proposal.

**Phase 2:** This includes the construction of the condensate water disposal system located in the Hewitt flare station. This phase also includes the spare spray nozzle for the flare.

**Phase 3: (Future Work)** This includes engineering the condensate water collection system from the landfill. This will include designs to retrofit the drain sumps, piping and connection to the flare station. To avoid duplicate SCAQMD permit costs, the SCAQMD permitting for this Phase are included in the Phase 1 work.

**Phase 4: (Future Work)** This includes the construction of the condensate water collection system designed in Phase 3.

## **BACKGROUND**

The Regional Water Quality Control Board has severely limited the conditions under which condensate water can be returned to a landfill. It is our understanding that CalMat

*1205 North Red Gum Street, Suite B, Anaheim, California 92806*  
*(714) 632-9969 Fax: (714) 632-9968*

Mr. George Cosby  
February 24, 1994

wants to avoid the disposal of condensate water in this manner. The disposal method addressed by this proposal is to combust the water and associated organics in the Hewitt landfill gas flare. This method of condensate water disposal should have a limited impact on the flare operation provided sufficient methane gas is available. Preliminary calculations performed by GCE and previously submitted to CalMat indicate that disposal in this manner should not cause flare temperature problems. In later years of the flare system operation, additional modifications may be required to improve the heat efficiency of the disposal system. These modifications are not required nor recommended at this time.

## **PROPOSED CONDENSATE DISPOSAL SYSTEM DESCRIPTION**

The proposed condensate collection and disposal system would consist of several components (listed below) to collect condensate water and spray it into the flare. The spray nozzle used in this system will be provided by Perennial Energy. They have designed and installed spray systems on their own flares as well as John Zink flares similar to the one installed at Hewitt. The system described here is conceptual in nature since detailed design has not been completed.

**Design Plans and Specifications:** The proposal includes design plans sufficient for the construction of the water disposal system. Special provision specifications for the system will not be prepared, and the system construction will not be bid.

**Condensate holding tank:** A 1000 gallon poly tank will be installed at the Flare Station. The concrete foundation for the tank will include secondary containment. All condensate water will be collected in this tank. Because the tank is larger than 250 gallons, a separate SCAQMD permit will be required. We have included the engineering for the permit preparation, however the actual SCAQMD fee is not included. Condensate water from the landfill and condensate water from the flare station separator will be pumped to the poly tank.

**Flare Modifications:** The method of condensate disposal will consist of an air atomized spray system. The spray nozzle selected for this project will be supplied by Perennial Energy. This system is only limited by the ability to add sufficient heat to the condensate to evaporate it. It is anticipated that water injection up to 1 GPM could be added without impacting the flare performance.

**Control System:** The control system will include equipment necessary to control the water spray into the flare. The control components include a motor starters for the air compressor and a pneumatic water pump solenoid valve. It also includes connection to the existing temperature controller and the annunciator, high liquid level controller in the condensate tank, a timer, and the necessary switches and lights needed to control the system.

**Process Controls:** The condensate water disposal system will require its own control system. Several permissive conditions will need to exist before the water spray system will start. First the flare must be operational and above its low shutdown temperature (1400 deg F.). Second the water level in the tank must be sufficiently high for the water pump to run. While this is a simple system to implement, it does not allow a buffer between the flare shutdown temperature and the permissive temperature for the water injection system. Therefore, it is possible that the flare may operate at a lower than normal temperature while the spray system is operating. Included in this proposal is a cycle timer to avoid "fast cycle" operation of the spray system. This will hold the spray system off for 10 minutes after a low temperature condition is experienced. This is to allow the flare system to stabilize prior to injecting water.

**Air Compressor:** An air compressor will be installed in the flare station. The proposed location for this equipment is within the electrical shed. It is estimated that the compressor will be 5 hp.

## **PROJECT TEAM AND PERSONNEL**

Gas Control Engineering has an exceptionally talented staff of engineers and field technicians. Our team is amongst the best ever assembled to do landfill system design work. Mr. Prosser, President of GCE will be the project manager on this work. Flare station design modifications will be engineered by Mr. Kirk Hein, PE under Mr. Prosser's direction. Mr. Hein is very familiar with this type of work having owned and operated a custom fabrication shop prior to becoming a professional engineer. Mr. Alan Janecek, PE, will design the field collection system included in the optional work. Mr. Janecek has extensive experience working on 17 landfills in Riverside County. Because he was responsible for the operation of gas and liquid systems at these sites, Mr. Janecek was acutely aware of the need for reliable, cost-effective systems. Mr. Janecek has worked with both vacuum and pump collection systems and knows the advantages and disadvantages of each.

RTB Construction will work with GCE on this project. RTB personnel have been constructing LFG systems since 1980. They are thoroughly familiar with all aspects of field construction and are among the most qualified construction firms in California. They have an excellent reputation in the construction industry. Mr. Dick Prosser and Mr. Don Brookshire, the Responsible Managing Officer of RTB first worked together in 1980 on a landfill project in Wilmington, California. GCE is confident that CalMat will find the work performed by GCE and RTB to be exceptional.

## **SCOPE OF WORK**

This section describes the work that will be performed for this project. Only phases 1 and 2 work are included in this proposal. Additional phases may be authorized by CalMat in the future.

### **Phase 1: Flare Station Design Modifications and SCAQMD Permits**

- Task 1.1: Review background information on the Hewitt landfill -- Under this task, GCE will review the proposed design concept based on information collected at the landfill. Information required includes the rate of condensate water generation within the gas collection system and at the flare station, and verification of the LFG flow rate. The location of the proposed equipment within the flare station will also be verified.
- Task 1.2: Prepare and submit to CalMat preliminary system design drawings -- GCE will prepare drawings showing the proposed water spray system. These drawings will be used for CalMat approval and submission to SCAQMD as part of the permit process.
- Task 1.3: Prepare process calculations -- GCE will finalize process calculations needed for the SCAQMD permit submittal.
- Task 1.4: Prepare and submit to SCAQMD permit applications for the system modifications -- GCE will prepare the forms necessary to obtain the SCAQMD permit to construct for the flare modification and the condensate tank. It is assumed that health risk assessment will not be required for this project and is not included as a work item. Condensate water sampling and analysis is not included in this scope of work. If SCAQMD requires this analysis it will be performed as an optional task.
- Task 1.5: Prepare detailed plans and specifications for the system -- GCE will complete the design drawings needed to build the system. This will also include specification sheets for critical components of the system.
- Task 1.6: Confirm field construction costs with CalMat -- Following the completion of the detailed design work, GCE will confirm the project construction costs. The purpose of this work is to confirm the phase 2 construction budget. Should the design concepts change, then the construction costs may also change. Costs may either increase, decrease or remain the same.

### **Phase 2: Construction of the Flare Station Design Modifications**

- Task 2.1: Procure materials -- GCE will work with RTB Construction on this project. Under this task GCE and/or RTB will procure materials for the project.

- Task 2.2: Construct the System -- The flare system modifications will be implemented. This will include the installation of the condensate water holding tank, the flare station piping, the pumps and the system controls.
- Task 2.3: Perform Construction Observation -- GCE will work with the field contractor to verify that the system is installed according to the designs. This work will be conducted by one of GCE's engineers under the supervision of Mr. Prosser.
- Task 2.4: Start the modified system -- Mr. Prosser will start the completed condensate incineration system and provide training to CalMat personnel.
- Task 2.5: Perform Flare Source Testing (If required by SCAQMD) -- Source testing is not included in this work scope. This Task is shown as an option if it is required as a condition on the permit to construct.
- Task 2.6: Submit information to SCAQMD and request the permit to operate -- GCE will submit a request to SCAQMD for the issuance for the permit to operate for the new system. If it is anticipated that the condensate water from the field will also be collected then it is recommended that the submission of this request be delayed pending completion of this work phase.
- Task 2.7: Prepare an O&M Manual on the implemented system -- GCE will prepare a description of the condensate system operation. This will also include operation and maintenance literature on the components installed in the system.

### **Phase 3 Condensate Water Collection System Design (Future work)**

- Task 3.1: Obtain detailed information on the location of the condensate water collection drains -- The locations are essential to determine the pipe necessary to connect all of the sumps.
- Task 3.2: Design condensate sump retrofits -- This design will include the sealing of the condensate water sumps and installation of collection components. Included in this proposal is the installation of a plastic boot within the existing sump. The sumps will reuse the drain trap assemblies currently installed within them. Also installed within the sumps will be the collection component for the water system. This will consist of a pneumatic pump. Modifications to the well lateral pipes are not included in the scope of work.
- Task 3.3: Design the condensate water collection header system -- The condensate water will be transported to the flare station through HDPE pipe. The pipe will be installed adjacent to the existing LFG header. Expansion loops will be installed on an as-required basis to allow for thermal expansion and contraction of the condensate water pipe.

Task 3.4: Design the Compressed Air Distribution system -- A steel compressed air pipe will run parallel to the condensate water pipe and will be connected at the flare station.

**Phase 4: Construction of the Condensate Water Collection System (Future work)**

Task 4.1: Procure materials -- GCE will work with RTB Construction on this project. Under this task either GCE or RTB will procure materials for the project.

Task 4.2: Construct the System -- The field collection system modifications will be implemented. This will include retrofitting the condensate water drains, installation of the liquid gathering pipe and air pipe, and connection to the flare station.

Task 4.3: Perform Construction Observation -- GCE will work with the field contractor to verify that the system is installed according to the designs. This work will be conducted by one of GCE's engineers under the supervision of Mr. Prosser.

Task 4.4: Start the modified system -- Mr. Prosser will start the completed condensate collection system and provide training to CalMat personnel.

Task 4.5: Prepare an O&M Manual on the implemented system -- GCE will prepare a description of the condensate system operation. This will also include operation and maintenance literature on the components installed in the system.

**PROJECT SCHEDULE**

The proposed work will be performed in several work phases as described below. The schedule is approximate and is subject to change. The factor that will have the greatest impact on the proposed schedule is the time required by SCAQMD to issue the permit to construct.

MONTH	1	2	3	4	5	6
<b>Phase 1: Flare Station Design Modifications and SCAQMD Permits</b>						
Task 1: Review background information on the Hewitt landfill	xx					
Task 2: Prepare and submit to CalMat preliminary system design drawings -- GCE will prepare concept drawings. These drawings will be used for CalMat approval and submission to SCAQMD as part of the permit process.	xxxx					
Task 3: Prepare process calculations	xxxx					
Task 4: Prepare and submit to SCAQMD permit application for the system modifications		xxxx	xxxx	xxxx	xxxx	
Task 5: Prepare detailed plans and specifications for the system	xxxx					
Task 6: Confirm field construction costs with CalMat		x				x
<b>Phase 2: Construction of the Flare Station Design Modifications</b>						
Task 1: Procure materials						xx
Task 2: Construct the System						xxxx
Task 3: Perform Construction Observation						xxxx
Task 4: Start the modified system						x
Task 5: Perform Flare Source Testing (If required by SCAQMD)						→
Task 6: Submit information to SCAQMD and request the permit to operate						→
Task 7: Prepare an O&M Manual on the implemented system		xx				xx

## PROJECT COSTS

The costs for Phase 1 of this project will be performed on a fixed firm-price basis except as limited in this proposal. The costs for Phase 2 work are preliminary and are based on numerous assumptions. Provided the systems are similar to that described in this proposal, these costs should remain constant. These costs are based on unit prices that are included in the Table of Project Costs shown below. The total estimated cost for GCE labor, materials and Construction by RTB for Phases 1 and 2 work, is \$41,186. Spreadsheets showing a further breakdown of labor and materials are also attached. Design changes required because of changes in conditions or requested by CalMat may cause a difference in the total system cost. GCE used this approach to provide CalMat

Mr. George Cosby  
February 24, 1994

with the lowest possible priced system. This allows us to remove contingencies that would increase the price to CalMat.

**Table of Project Costs**

<b>Phase</b>	<b>GCE</b>	<b>Construction</b>
<b>Phase 1:</b> Flare Station Design Modifications and SCAQMD Permits	\$10,328	\$0
<b>Phase 2:</b> Construction of the Flare Station Design Modifications	4,046	26,812
<b>Phase 3:</b> Condensate Water Collection System Design (Future Work) (1)	5,294	0
<b>Phase 4:</b> Construction of the Condensate Water Collection System (Based on 15 sump conversions and 3800 feet of collection header) (Future Work) (1)	3,156	86,289

(1) Costs are to be confirmed

## **AUTHORIZATION**

We have attached two copies of a Contract as attachment 1 to this proposal for your use in authorizing this work. Signed and returned copies will be our authorization to proceed. We will return an executed copy to you for your records.

## **LIMITATIONS**

Although Gas Control Engineering will take steps to help ensure that the submitted information will be acceptable to the District, regulatory interpretations and District policies are continually changing. Therefore, it is possible that the District may have format or technical comments on the submitted documents. We have allotted 4 hours in the budget to respond to these questions. However, if this amount of time is not sufficient, we will promptly notify CalMat and request appropriate budget revisions.

The installation of this work will probably require SCAQMD permits for both the liquid collection system, the flare modifications and the condensate water tank. The SCAQMD permitting fees are estimated at \$6,900. This fee is not included in the proposed costs.

Information gathered during the project by Gas Control Engineering is considered confidential and will be released only upon written authorization of CalMat or as required by law. California law requires a person to inform the State if a situation is encountered that can be considered an immediate endangerment to the public's health or welfare and/or the environment.

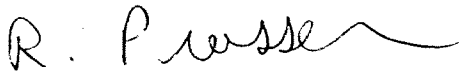
Mr. George Cosby  
February 24, 1994

The design work prepared under this scope of work will be consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in Southern California. No warranty is expressed or implied.

This proposal is the property of Gas Control Engineering, Inc. and may be used only by the Client and only for the purposes stated, within a reasonable time from its issuance.

We would very much like to work with CalMat on this project and look forward to discussing it with you in more detail. Thank you for this opportunity to propose these services to CalMat.

Sincerely,  
**Gas Control Engineering**

A handwritten signature in black ink, appearing to read "R. Prosser", with a long, sweeping horizontal line extending to the right.

Richard W. Prosser, P.E.  
President

RWP/JHW/cw

Enclosures

**Agreement Between CalMat Properties and  
Gas Control Engineering, Inc.  
for a Unit Price Project**

This **AGREEMENT** is entered into this 24th day of February, 1995, between **CALMAT PROPERTIES (CALMAT)**, 3200 San Fernando Road, Los Angeles, California 90065 and **GAS CONTROL ENGINEERING, INC. (GCE)**, 1205 North Red Gum Street, Suite B, Anaheim, California 92806.

The Parties agree as set forth below.

1. **The Project is: Design and Construction of a Landfill Gas Condensate Water Collection and Disposal System;** GCE Proposal No. 95-109-Rev. 1 dated February 24, 1995 and included as part of this contract.
2. **SCHEDULE AND TERM:** GCE shall complete all work under this contract per the time schedule indicated in the proposal No. 95-109-Rev. 1 dated February 24, 1995 and included as part of this contract.
3. **COMPENSATION:** The compensation to GCE for providing the services set forth herein shall not exceed Forty One Thousand One Hundred Eighty-Six Dollars (\$41,186) without the prior written consent of CalMat Properties. Work shall be done on a unit cost basis. Unit costs are included on the cost sheets attached to this Proposal. Extra work performed by GCE shall be compensated at the rates indicated on Attachment 2.
4. **PAYMENT SCHEDULE:**
  - 4.1. The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.
  - 4.2. Applications for Payment shall indicate the percentage of completion of each portion of the work as of the end of the period covered by the Application for Payment.
  - 4.3. The value of the Work completed shall be calculated by multiplying the percent of project completion times the unit value of the Work completed.
  - 4.4. CalMat shall make periodic payments within thirty (30) days of receiving and approving a billing statement in proportion to the satisfactory completion of GCE's services. GCE reserves the right to stop work for non-payment.
  - 4.5. Final Payment constituting the entire unpaid balance of the Contract Sum shall be made by CalMat to GCE when the Contract has been fully performed by GCE except for GCE's responsibility to correct nonconforming Work.
5. **FINANCE CHARGES:** Invoices will be issued on a monthly basis, or upon completion of a project, whichever is sooner. The net cash amount of this invoice is payable on presentation of the invoice. If not paid within 30 days after the date of the invoice, the unpaid balance shall be subject to **FINANCE CHARGE** of 1.5% per month, which is an **ANNUAL PERCENTAGE RATE** of 18%.

6. **TERMINATION:** This Agreement may be terminated at any time by either party providing ten days advance written notice is given. In the event of termination, GCE will be compensated for services performed up to the date of termination which have been accepted by CalMat Properties.
7. **LIABILITY:** GCE shall, at no cost to CalMat, re-perform engineering services which fail to satisfy the standard of care for professionals normally practicing in Southern California performing this type of work, for the work provided.
8. **WARRANTEE:** All services provided by GCE shall be warranted for a period of 1 year following installation and/or project completion.
9. **CONFIDENTIALITY:** Information gathered during the project with GCE is considered confidential and will be released only upon written authorization by GCE or as required by law.
10. **INSURANCE:** GCE shall maintain General Liability insurance in the amount of 1 Million Dollars (\$1,000,000). GCE shall comply with Workers Compensation insurance laws.
11. **AMENDMENT:** This Agreement may be amended only by written instrument signed by both parties.
12. **INCONSISTENT TERMS:** If the attachments or exhibits to this Agreement, if any, are inconsistent with this Agreement, this Agreement shall control.

IN WITNESS WHEREOF, the Agreement is executed by CalMat Properties and by Gas Control Engineering, Inc.

**CalMat Properties**  
3200 San Fernando Road  
Los Angeles, California 90065

By: \_\_\_\_\_

George Cosby  
Vice-President

\_\_\_\_\_  
Date

**Gas Control Engineering, Inc.**  
1205 North Red Gum, Suite B  
Anaheim, California 92806

By: R. P. Prosser

Richard W. Prosser  
President

FEB 24, 1995  
Date

# GAS CONTROL ENGINEERING, INC.

## 1995 BASIS OF CHARGES

1. Listed herein are typical prices for services most frequently performed by Gas Control Engineering, Inc. Prices for other services not listed will be given upon request.
2. Invoices will be issued on a monthly basis, or upon completion of a project, whichever is sooner. The net cash amount of this invoice is payable on presentation of the invoice. If not paid within 30 days after the date of the invoice, the unpaid balance shall be subject to a FINANCE CHARGE of 1.5% per month, which is an ANNUAL PERCENTAGE RATE of 18%.
3. For hourly workers, time worked in excess of eight hours per day and weekend work will be charged at 1.5 times the hourly rate.
4. Per diem will be charged at a rate of \$75 per day per person or expenses plus 15%, whichever is greater. Per diem will be charged for all projects in excess of 50 miles from the Gas Control Engineering, Inc. office.
5. Outside services will include a 15% markup unless otherwise noted.
6. We are protected by Worker's Compensation Insurance, and will furnish certificates thereof upon request. We assume the risk of damage to our own supplies and equipment. If your contract or purchase order places greater responsibilities upon us or requires further insurance coverage, GCE will, when specifically directed by you, take out additional insurance (if procurable) to protect us at your expense, but we shall not be responsible for property damage from any cause, including fire and explosion, beyond the amounts of coverage of our insurance.
7. All environmental samples may be returned to clients at Gas Control Engineering, Inc.'s discretion 30 days after submission of final report, unless prior arrangements are made.
8. Proper disposal or handling of soil boring cuttings, well development and purge waters, decontamination solutions, and other contaminated/potentially contaminated materials is the responsibility of the client. Gas Control Engineering, Inc. can provide containers for on-site containment and can advise the client regarding proper handling procedures.
9. Expert witness and preparation at two times the regular fee.

## FEE SCHEDULE

Principal Engineer	\$108
Senior Professional	87
Staff Professional	76
Assistant Professional	55
Designer	48
Technician	39
Word Processing/Clerical	38
Engineering Assistant	37
Geologist Assistant	26
Mileage	\$0.35/mi.
Copies	\$0.10 each
Drawing Copies	\$2.50 each

GCE design costs for the Calmat landfill condensate water disposal system								
	2/25/95	Prosser	Senior Engineer	Project Engineer	Designer	WP/Clerical	Expenses	Total
		108	87	55	48	38	1	
Phase 1:	Flare Station Design Modifications and SCAQMD Permits							
Task 1:	Review background information	8	0	0	0		42	906
Task 2:	Preliminary system design drawings	4	4	0	20			1740
Task 3:	Process calculations	1	6	0	0		0	630
Task 4:	SCAQMD permit application	2	16	8	0		0	2048
Task 5:	Plans and specifications	4	16	16	40	10	0	5004
Task 6:	Construction Costs Estimate	0	0	0	0	0	0	0
								10328
Phase 2:	Construction of the Flare Station Design Modifications							
Task 1:	Procure materials	0	0	0	0	0	0	0
Task 2:	Construct the System	0	0	0	0	0	0	0
Task 3:	Construction Observation	0	0	0	0	0	0	0
Task 4:	System Start-up	16	0	0	0	0	0	1728
Task 5:	Flare Source Testing (Optional)	0	0	0	0	0	0	0
Task 6:	SCAQMD permit to operate	1	6	0	0	4	0	782
Task 7:	O&M Manual	2	8	4	0	8	100	1536
								4046
Phase 3	Condensate Water Collection System Design							
Task 1:	Obtain site information	2	0	0	0	0	0	216
Task 2:	Obtain a digital map of the Hewitt landfill	0	0	0	0	0	0	0
Task 3:	Design condensate sump retrofit	1	3	0	8	0	0	753
Task 4:	Condensate water collection header syste	1	3	8	40	2	0	2805
Task 5:	Compressed Air Distribution system desig	1	4	4	16	2	0	1520
								5294
Phase 4:	Construction of the Condensate Water Collection System							
Task 1:	Procure materials	0	0	0	0	0	0	0
Task 2:	System Construction							0
Task 3:	Construction Observation							0
Task 4:	System Start up	16	0	0	0	0	0	1728
Task 5:	O&M Manual	1	8	4		8	100	1428
								3156
Totals		60	74	44	124	34	242	22824

Condensate Water Collection and Disposal					
Preliminary Cost Estimate for Hewitt Landfill					
Prepared by RWP					
02/25/95					
ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	TOTAL COST
<b>Phase 2 flare station construction</b>					
1	Condensate Tank (250 gal poly tank)	1	LS	\$4,110.75	\$4,110.75
2	Air Compressor (5HP)	1	LS	\$3,517.50	\$3,517.50
3	Limit Switches	1	LS	\$1,753.50	\$1,753.50
4	Control Panel	1	LS	\$2,115.75	\$2,115.75
5	Injection Pump	1	LS	\$1,674.75	\$1,674.75
6	Electrical installation	1	LS	\$2,982.00	\$2,982.00
7	Flare Station Piping	1	LS	\$1,890.00	\$1,890.00
8	Flare Modifications	1	LS	\$4,725.00	\$4,725.00
9	Spare Spray Nozzle	1	Each	\$1,575.00	\$1,575.00
10	24 V power supply	1	LS	\$577.50	\$577.50
11	Concrete Foundation	1	LS	\$1,890.00	\$1,890.00
					<b>\$26,811.75</b>
<b>Phase 4 field construction</b>					
1	Sump Retrofit 10" HDPE pipe boot	15	EA	\$1,531.95	\$22,979.25
2	Solenoid valve (24 volt with timer)	15	EA	\$840.00	\$12,600.00
3	Air silencer	15	EA	included	
4	Geoguard Bladder Pump 1.5"/44" SS	15	EA	\$1,349.25	\$20,238.75
5	foot screen included with pump	15	EA	included	
6	air valve (1/4")	15	EA	included	
7	liquid valve (1/2")	15	EA	included	
8	Condensate Header (Above Grade)	3800	LF	\$2.89	\$10,972.50
9	Misc. Air Valves	5	EA	\$168.00	\$840.00
10	Misc. Liquid Valves	5	EA	\$220.50	\$1,102.50
11	Compressed Air line 1" galv. steel	3800	LF	\$3.05	\$11,571.00
12	Elect. Wiring (on grade 12v dc wire)	3800	LF	\$1.58	\$5,985.00
					<b>\$86,289.00</b>
<b>Optional Work</b>					
1	Condensate Sampling and Analysis	1	LS	TBD	TBD
2	Source Testing	1	LS	\$10,000.00	\$10,000.00
	<b>TOTAL</b>				<b>\$10,000.00</b>



## INTER OFFICE MEMORANDUM

TO: Scott Wilcott  
FROM: George Cosby  
SUBJECT: METHANE GAS SYSTEM 7245 Laurel Canyon Boulevard

DATE: March 13, 1995

The intent of this memo is to provide information needed to be in compliance for condensate collected at the Hewitt Landfill site. Currently, we operate a self storage and land rental facility at 7245 Laurel Canyon Boulevard, North Hollywood, California. This property was purchased in 1903. Under the Consumers Rock Co., later merged into Consolidated Rock Co., excavation of the property took place and material was railed into Los Angeles. The material mined was primarily sand. The plant stopped operation in the 1969/1976 era. About 1972 a contract was let to L.A. By Products Co. to fill the site with household rubbish. This procedure took place until 1977. While the process of filling was going on, any dirt that was left on the slopes for setbacks etc. was taken for daily cover. This made the site like a large box with no side wall protection nor any protection at the bottom for seepage. When the time came for surcharge of the rubbish, L.A. By Products did not want to continue paying royalty. Therefore, Conrock terminated the contract. The site remained open for a few years. CalMat spent large amounts of money for settlement and installation of a methane gas system. When I took over the site in 1981, I closed and stopped all operations. Two years later we were able to get a large contractor to bring in half million yards of dirt free to fill the site and bring it into some reasonable compliance. In 1985 we started a self storage company with R.V. parking and land rental. Today we are operating a self storage and R.V. storage with 96% occupancy and 22 acres of land rented. We currently signed a 10 year lease with two five-year options. We also have a three year contract with Desmond Studios for 8.5 acres of land.

This 57 acre site has an additional 5 acres that could be leased, however, it is zoned R-1, therefore, it would be difficult and costly to develop and not worth the effort.

The sites this year will generate some \$960,000 in revenue from self storage and land rentals. The site will show some \$500,000 in net profit at year end.

The largest operating cost of the site is controlling methane gas. \$60,000 dollars was budgeted this year for annual maintenance work. Some \$3,500 per month is spent on monitoring of the methane gas. This gas is volatile and can be explosive if allowed to build up.

A covenant placed against the Hewitt Landfill in 1979 says that CalMat must maintain the property in compliance with current laws or the property would be taken over and maintained.

However, currently and for the past 10 years, we have had no problems with methane gas moving away from the site. We do have major residential housing built up against our property line. CalMat fought against the building of these residential units, however, we lost. Current law prohibits building and all buildings must be 2,000 ft away from any landfill site.

To further our efforts and be in compliance, condensate must be trucked off the site or treated. Recently a new option of spraying the condensate across the flare which is used for burning off the methane gas has been accepted by AQMD. This is a good option for CalMat.

Therefore, the expenditure for installation of this system is requested. The total cost for installation of this system will be as follows:

Installation of Flare Spray Unit	\$ 50,000
Monitoring Flare Test	\$ 12,000
Field Installation	\$150,000
AQMD Permits	\$ 10,000
Engineering Costs	\$ 50,000
Consultant Water Board	\$ 20,000
Motor Change-Out	\$ 10,000
	<b>\$302,000</b>
Budgeted	\$ 60,000
Non Budgeted	\$232,000

The work would start, with request of AQMD Permits, in the April/May period with actual construction work starting in June finishing in late September.

/oc  
COS\METHGASS

Return to:  
Dick Prosser  
Gas Control Engineering, Inc.  
1205 N. Red Gum St., Ste B  
Anaheim, California 92806

Gas Control Engineering, Inc.  
1205 N. Red Gum St., Ste B  
Anaheim, California 92806  
ph. (714) 632-9969  
fax (714) 632-9968

**GEORGE COSBY**

**REQUEST FOR QUOTATION**

**Landfill Gas Blower**

Date: April 13, 1995

**THIS IS NOT AN ORDER.**

Date Delivery Required: Reply not later than: Dept.  
Quote Best Delivery April 25, 1995

Job No.: 1003-1 Rev.

**VENDOR**

We quote you as below:

Bruce Sneller  
Sneller and Associates  
P.O. Box 3338  
Tustin, California 92681  
ph (714) 832-1881  
fax (714) 832-0545

Company Name  
**NEW YORK BLOWER Co**  
**SNELLER & ASSOC.**

Please quote on this form your best price, terms, and delivery on the articles described below. Vendor must fill in blanks 1-8 to receive consideration. Sign your firm name and official signature and mail completed form. We will consider substitute offers if differences in specifications are explained.

1. By (Signature) *Bruce Sneller*

2. Official Title

3. Date

**OWNER**

**4/25/95**

4. Terms

5. P.O.D.

6. Ship Via  
Best way

7. Shipping Information  
weight: **670#**  
cubes: **55**

8. Best  
Shipping Date  
**6-7 WEEKS**

**N30 O.A.C.**

Jobsite -  
see address  
below

- Project: Hewitt Landfill
- Location: 7361 Laurel Canyon, N. Hollywood, California
- Owner: CalMat Properties
- Quotation Validity: 60 days
- Type of Quotation Required: Firm Fixed Price X

Time & Materials with price not to exceed \_\_\_\_\_  
Other \_\_\_\_\_

**QUOTATIONS SHALL COMPLY WITH THE FOLLOWING ATTACHMENTS:**

Blower specification sheet

Quoted Prices: **\$315 FOR 150L.**

Blower \$ **3655.00** In Words \_\_\_\_\_

Blower Coating \$ **150.00** In Words \_\_\_\_\_

Signature *Bruce Sneller*

gc\1003-11\030410\1.doc

**BLOWER 1**

(23) 758-1523

the NEW YORK BLOWER COMPANY

represented by

**SNELLER & ASSOCIATES**

P.O. BOX 3338, TUSTIN, CALIFORNIA 92681

PH: [714] 832-1881 FX: [714] 832-0545

4/25/95

Page 1 of 3

TO: **DICK PROSSER**  
GAS CONTROL ENGINEERING  
[714] 632-9968

FROM: **BRUCE SNELLER**

RE: BLOWER - JOB NO. 1003-1 - HEWITT

We are pleased to provide our proposal for subject project as follows:

Max. Flow: 1200 SCFM @ 41.3" W.C. @ .0695 #/CF density [ 500' elev./ 100 deg.]  
Direct Driven @ 3500 RPM; 11.1 BHP @ density

NEW YORK BLOWER CO. SIZE 2308A15 PRESSURE BLOWER, ARRGT. 8 with:

- aluminum impeller
- 8" - 125/150 ANSI flanged inlet and outlet
- housing drain with plug
- access door, bolted
- stainless steel key and set screws on wheel hub
- OSHA safety guards [ coupling guard and shaft/bearing guard ]
- motor mounting and run testing by nyb
- vibration level shall not exceed 1.2 mils in any direction
- Nominally airtight construction, to include double lip buna seal, solid housing drive side, inlet plate gasketing, double the number of studs on the inlet plate
- 15 HP, 3600 RPM, Premium Efficiency / Chem - Severe Duty motor;  
Class F insulation, stainless nameplate and hardware, double encapsulated windings

CHECKING ON

COST, **FREIGHT ALLOWED TO CALIFORNIA**.....\$3,655.00

+ 315.00  
+ 150.00

ADD \$ 315.00 for rubber vibration isolation base [ to include channel sub-base under entire fan ]

\$4,120.00 x 1.0775 = 4439.30

ADD \$ 150.00 for coating airstream of housing with a Herestle Phenolic paint

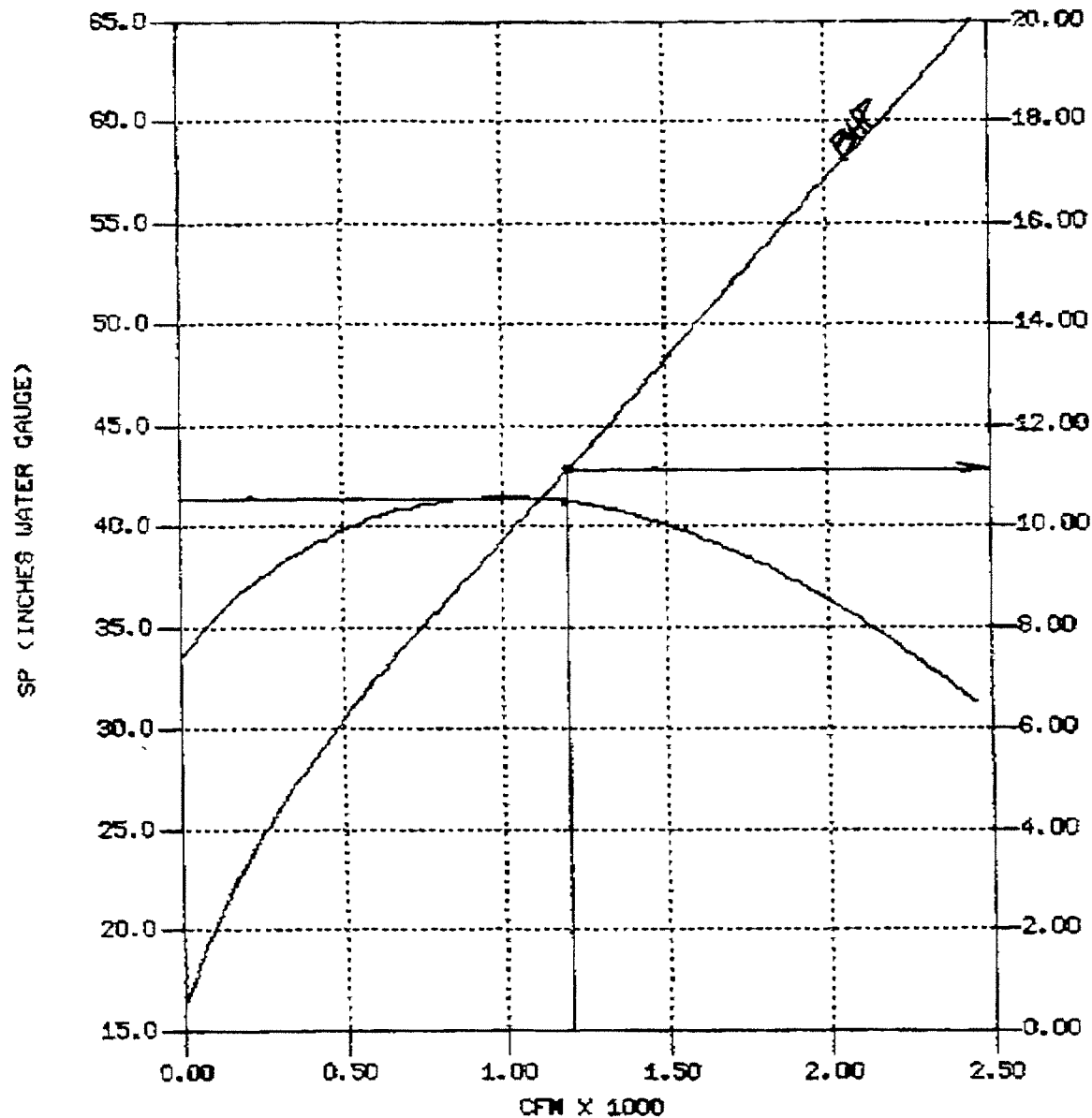
Delivery: 6 to 7 weeks after receipt of order and approval of drawings

Attached is fan curve and noise data. Blower would be stable from wide open to fully closed, without surge, cavitation, and/or vibration.

Please advise if you require any further information !

THE NEW YORK BLOWER COMPANY

=FAN=TO=SIZE=



Copyright © 1993 The New York Blower Company

FAN INFORMATION

Pressure Blower - AL  
 Direct Drive MATL: Aluminum  
 Size: 2308  
 Tag : B1 BLOWER - HEWITT  
 Date: 4/25/1995  
 CFM : 1200 SP : 41.30  
 OU : 3429  
 RPM : 3500 BHP: 11.1  
 DEN : 0.0695  
 TEMP: 100 DEG F  
 SE : 69.8% NE : 71.0%

CUSTOMER

GAS CONTROL ENGINEERING  
 1205 N. RED GUM, STE. B  
 ANAHEIM, CA  
 92806  
 Phone: (714) 632-9969  
 FAX : (714) 632-9968

YOUR REPRESENTATIVE

SNELLER & ASSOCIATES  
 P.O. BOX 3338  
 TUSTIN, CA  
 92681  
 Phone: (714) 832-1881  
 FAX : (714) 832-0545

v1.20

FROM : Sneller &amp; Assoc.

TEL: 00

APR.25.1995 7:34 AM P 3

NEW YORK BLOWER COMPANY  
=FAN=TO=SIZE=  
SOUND REPORT

Customer: GAS CONTROL ENGINEERING  
Address : 1205 N. RED GUM, STE. B  
ANAHEIM, CA

92806

Phone : (714) 632-9969

FAX : (714) 632-9968

Project# : ---

Fan Tag : B1 BLOWER - HEWITT

-----  
FAN TYPE : Pressure Blower - AL  
SIZE : 2308 MATERIAL : Aluminum  
DRIVE : DIRECT  
CFM : 1200 SP inches W.G. : 41.30  
ALT : 500  
TEMP (Deg F) : 100 MAX TEMP (Deg F): ~~75~~100  
DENS : 0.0695  
RPM : 3500 BHP : 11.10  
S.E. : 69.8 % M.E. : 71.0 %  
CLASS : NONE  
WIDTH : 100.0 % DIAMETER : 100.0 %  
OUTLET VELOCITY : 3429  
MAX SPEED: 3800 RPM  
-----

SOUND POWER LEVELS (Lw) IN dB RE 10-12 W  
FREQ FAN SINGLE DUCTED

63	87	84
125	93	90
250	95	92
500	95	92
1000	92	89
2000	92	89
4000	89	86
8000	85	82

APPROXIMATE SINGLE DUCTED SOUND LEVEL ON "A" WEIGHTED SCALE AT Q=1  
IS dB 81 at 5 ft ~~≤ 75 dBA DUCTED~~  
Consult the sound performance printout or appropriate engineering  
supplement for New York Blower Company's policy regarding sound  
specifications.

Your Representative:

SNELLER &amp; ASSOCIATES

P.O. BOX 3338

TUSTIN, CA

92681

Phone: (714) 832-1881

FAX : (714) 832-0545

( )

(

[ ]

# GAS CONTROL ENGINEERING, INC.

1205 North Red Gum, Suite B, Anaheim, California 92806 Phone (714) 632-9969 FAX (714) 632-9968

## LETTER OF TRANSMITTAL

TO: George Cosby  
Calmat Properties  
3200 San Fernando Road  
Los Angeles, CA 90065

PHONE: 213 258-2777  
DATE: October 30, 1995  
PROJECT #: 1003-1  
FILE CATEGORY # 195

SUBJECT: Purchase Orders for Hewitt

Quantity	Description
----------	-------------

### Comments

George,  
The purchase requisitions for the N. Y. blower and the EWS line separator were faxed to the suppliers on 10/30/95. The attached documents are for your records.

For Your: ☐ As Requested ☐ Use ☐ Approval ☒ Information

Send By: ☒ 1st Class ☐ Airborne ☐ Fed X ☐ 2-Day Priority ☐ Other

By Dick Prosser  
Dick Prosser

☒ File ☐ Return to Sender ☐ Dispose

## PURCHASE REQUISITION

TO: ED W. SMITH MACHINE WORKS  
 ATTENTION: JERRY HITT  
 ADDRESS: 3117 COMMERCE STREET  
 DALLAS, TEXAS 75226  
 PHONE #: 214 939 0577  
 FAX #: 214 939 0580

ORDER PLACED BY: DICK PROSSER  
 PHONE #: 714-632-9969 DATE 10/30/95  
 PO#: VERBAL PER GEORGE COSBY, VICE PRESIDENT, CALMAT

BILL TO: CALMAT PROPERTIES  
 ATTENTION: GEORGE COSBY  
 ADDRESS: 3200 SAN FERNANDO ROAD  
 LOS ANGELES, CALIF. 90065  
 PHONE #: (213) 258-2777  
 FAX #: (213) 258 1583

SHIP TO: HEWITT SELF STORAGE  
 ATTENTION: RAUL  
 ADDRESS: 7361 LAUREL CANYON BLVD.  
 N. HOLLYWOOD, CALIF. 91605  
 PHONE #: (818) 982-6662  
 FAX #:

SHIP BY:

DELIVERY DATE: END OF '95

ITEM	QUANTITY	DESCRIPTION	COST
1	1	EWS LINE SEPARATOR	
		20" OD X 84" LONG - S/S	
		PER ATTACHED PROPOSAL -	
		SHIP VESSEL FOB	
		JOB SITE.	
		- BASE COST	8527.
		- ADDITIONAL 2" COUPLING - S.S.	88.
		- FREIGHT EST.	519.
		- ADDITIONAL SHELL LENGTH	230.
2	1	O & M MANUAL -	
			\$ 9364
TOTAL			

Telephone  
(214) 939-0577

PROPOSAL FROM

1003-1

QUOTATION NO.

S -5092912

**ED. W. SMITH MACHINE WORKS, INC.**

Machinists, Pressure Vessel Manufacturers, Steel Fabricators

3117 Commerce Street

DALLAS, TEXAS 75226



TO

Gas Control Engineering  
FAX-714-632-9968

DATE October 23, 1995

REQ. NO.

ATTENTION:

Mr. Dick Prosser

Presace

---

IN REPLY TO YOUR INQUIRY WE ARE PLEASED TO SUBMIT THE FOLLOWING QUOTATION:

---

1.0 4  
One (1) EWS In-line Separator designed to handle a flow of .  
1200 SCFM of a 1.53 S.P. gas operating at a minimum pressure  
of 13.2 PSIA and a maximum temperature of 100° Fahrenheit.  
The unit will be designed but not stamped per the ASME Code,  
Section VIII, Division 1, for 75 PSIG at 120° Fahrenheit.  
The vessel will be equipped with an EWS Vane Type Mist  
Extractor. Materials of construction will be T-304 stainless  
steel throughout.

PRICE, F.O.B. Factory, Houston, Texas . . . \$8,527.00 Ea. + 3%

The vessel will be 20 O.D. x 72" seam to seam and be  
equipped with the following:

Two (2) 8"-150# LJ Flanges for Inlet and Outlet  
~~TWO~~ ~~One (2)~~ 2"-3000# Coupling for Liquid Level Control & HLSD  
One (1) 1"-3000# Coupling for Dump Valve  
One (1) 1"-3000# Coupling for Manual Drain  
Two (2) 3/4"-3000# Couplings for Gauge Glass  
One (1) Inlet Diverter  
Flat Bottom Head

Delivery of above vessel may be made ten (10) to twelve (12)  
weeks after final approval of drawings.

Maximum liquid storage is 33 gallons. If additional storage  
capacity is required, the shell may be extended at a cost of  
\$230.00 extra per foot.

Prices are firm for acceptance for a period of thirty (30)  
days from date of quotation and for delivery through fourth  
(4th) quarter, 1995.

Thank you for the opportunity to quote your requirements.  
If you require any additional information, please feel free  
to contact us.

**ED. W. SMITH MACHINE WORKS, INC.**

3117 COMMERCE ST.  
DALLAS, TEXAS 75226

TELEPHONE: 214/939-0577

FAX: 214/939-0580

TELECOPIER TRANSMITTAL

TO: GAS CONTROL DATE: 10/30/95

ATTENTION: MR DICK PROSSER FAX NUMBER: \_\_\_\_\_

FROM: JERRY HITT NUMBER OF PAGES (INCLUDING THIS PAGE): 1

If you do not receive all transmitted pages, please call as soon as possible. Information contained on documents transmitted is confidential and precautions should be taken to insure it's security.

*ESTIMATED FREIGHT FROM DALLAS  
TO HOLLYWOOD ZIP 91605 IS \$519<sup>68</sup>*

*WE WILL SHIP PREPAID AND ADD  
ACTUAL FREIGHT COST TO INVOICE -  
AND 88<sup>00</sup> FOR 2" COUPLING -*

*BEST REGARDS*

*[Signature]*

## PURCHASE REQUISITION

TO: <u>SNELLER &amp; ASSOC.</u>			
ATTENTION: <u>BRUCE SNELLER</u>			
ADDRESS: _____			
PHONE #: <u>714 832-1881</u>			
FAX #: <u>714 832-0545</u>			
ORDER PLACED BY: DICK PROSSER			
PHONE #: <u>714-632-9969</u> DATE <u>10/23/95</u>			
PO#: VERBAL PER GEORGE COSBY, VICE PRESIDENT, CALMAT			
BILL TO: CALMAT PROPERTIES			
ATTENTION: GEORGE COSBY			
ADDRESS: 3200 SAN FERNANDO ROAD			
LOS ANGELES, CALIF. 90065			
PHONE #: (213) 258-2777			
FAX #: (213) 258 1583			
SHIP TO: HEWITT SELF STORAGE			
ATTENTION: _____			
ADDRESS: 7361 LAUREL CANYON BLVD.			
N. HOLLYWOOD, CALIF. 91605			
PHONE #: (818) 982-6662			
FAX #: _____			
SHIP BY: UPS BLUE		DELIVERY DATE: <u>12-11-95</u>	
ITEM	QUANTITY	DESCRIPTION	COST
<u>1</u>	<u>1</u>	<u>N.Y. BLOWER -</u>	<u>3560</u>
		<u>PER PROPOSAL #</u>	
<u>2</u>		<u>DELIVER BLOWER ON</u>	
		<u>TRUCK WITH LIFT GATE</u>	
		<u>AND PROVIDE 24 HR</u>	
		<u>MIN NOTICE</u>	
<u>3</u>		<u>PLEASE CONFIRM APPROX</u>	
		<u>SHIPPING DATE</u>	
<u>4</u>	<u>4</u>	<u>PLEASE PROVIDE 4 COPIES</u>	
		<u>OF THE O&amp;M MANUAL TO</u>	
TOTAL		<u>GAS CONTROL ENGINEERING,</u>	

ATTN DICK PROSSER

1205 N. RED GUM ST., STE B  
ANAHEIM, CA. 92806



Represented by:

**SNELLER & ASSOCIATES** .....

P.O. BOX 3338 • TUSTIN, CA 92681 • Telephone [714] 832-1881 • Fax [714] 832-0545

October 10, 1995

PAGE 1 of 2

TO: DICK PROSSER  
GAS CONTROL ENGINEERING

FROM: BRUCE SNELLER

RE: CAL-MAT

Attached is information on the shaft seal which is installed on the blowers for Cal-Mat at the Hewitt site. Please review and advise if any questions.

Relative to a new blower, following is current pricing:

NEW YORK BLOWER CO. SIZE 2308A10 PRESSURE BLOWER, ARRG. 10 with:

- flanged inlet and outlet
- access door
- stainless keystock on both ends of shaft
- phenolic coating of airstream
- double lip shaft seal, Buna-N
- 15 HP, TEFC Premium Efficiency motor; 1800 RPM
- housing drain with plug
- v-belt drive
- weather cover
- solid drive side on housing
- extra drill/tap on seal for purge

Fan to have drive selected for 3,700 RPM as existing unit was modified.

CAL-MAT / GAS CONTROL COST, FOB LA PORTE, INDIANA.....\$ 3,560.00

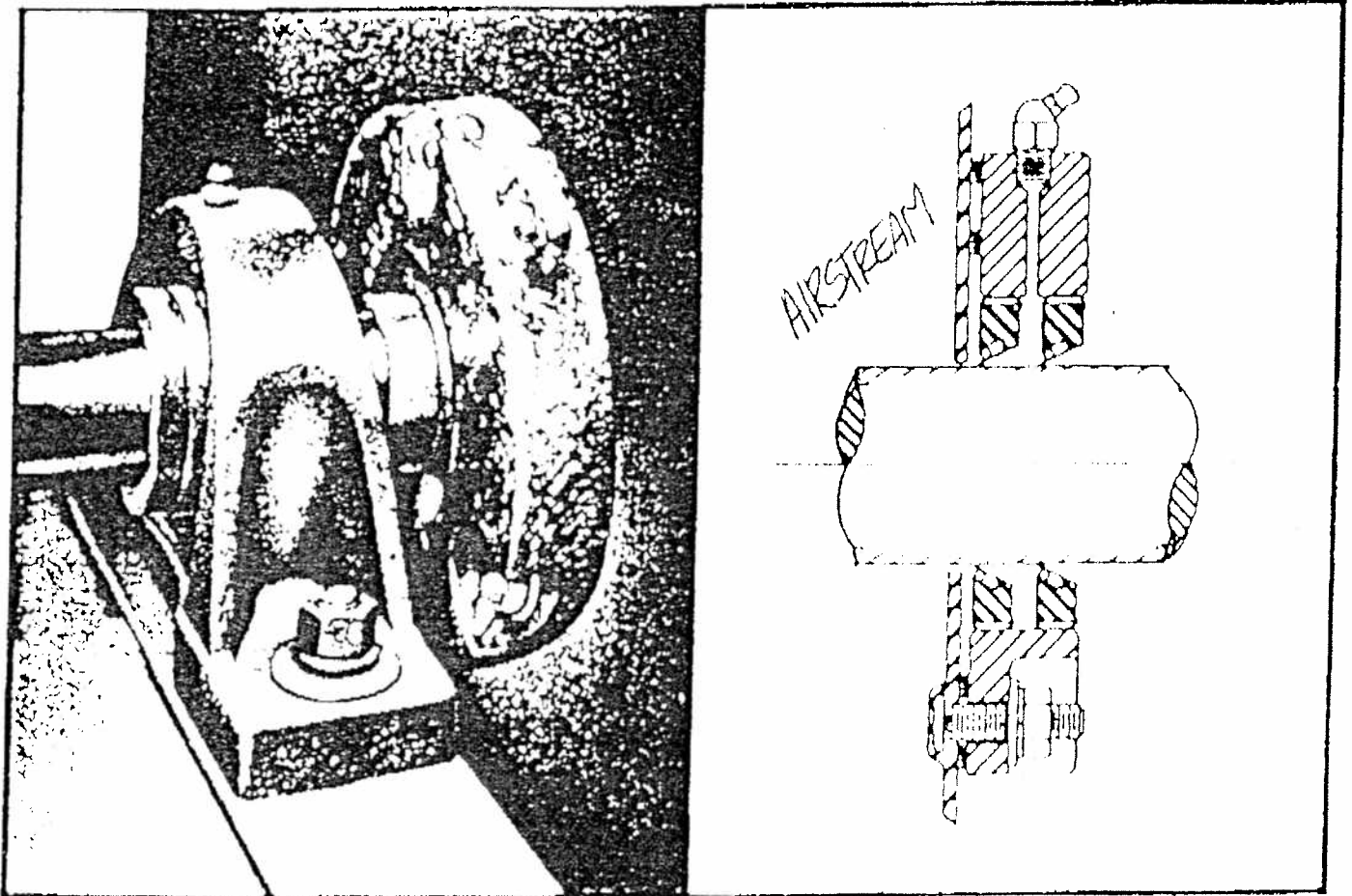
Delivery: 8 weeks

Please advise if any questions !

## DOUBLE LIP SHAFT SEAL

A pair of Buna-N shaft seal elements are pressed into a machined steel casing. The lip seal elements are retained against the shaft with stainless steel springs. An annular space between the lip seals is provided for lubrication and/or purge. Standard unit is supplied with one [1] zerk fitting for relubrication with a graphite lubrication medium or standard #2 grease.

For low leakage applications, approaching zero leakage, an additional hole is drilled and tapped into the seal housing to allow for positive pressure purge of compressed air or alternate gas. An alternate to a pressure purge is to run a 3/8" line from seal housing to inlet of blower (after drilling and tapping of seal housing) or fabricate a surround around seal and run line. There are customers who have used the hole for the zerk fitting for purge / line tap and did not lubricate the seals. This has worked successfully as the purge becomes the control feature in lieu of tight lip seal contact which is lost due to wear.





SNELLER & ASSOCIATES  
10561 Greenbrier Road  
Santa Ana, California 92705

Tele. (714) 832-1881 Fax (714) 832-0545

---

5/16/95

To: Calmat Properties  
Attn: Dick Prosser

From: Bruce Sneller

Subject: New York Blower Company  
Certified Drawings  
Your P.O. Number Verbal Per George Cosby  
nyb Shop Number M-6677

Enclosed are the drawings requested per your subject order.  
Approval of these drawings is \_\_, is not X necessary.

\_\_\_Four\_\_\_ Copies of certified drawings.  
\_\_\_Four\_\_\_ Copies of performance curves.  
\_\_\_Four\_\_\_ Copies of O & M's / Parts list.  
\_\_\_\_\_ Copies of sound data.  
\_\_\_\_\_ Copies of motor data sheets.

\* Reproducibles Enclosed

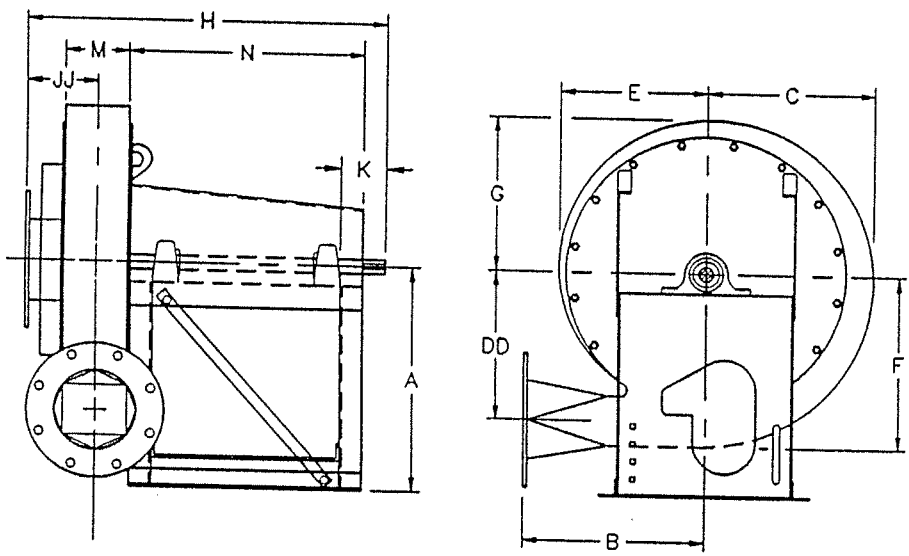
cc: Sneller & Associates file

THE EQUIPMENT REPRESENTED BY SUBJECT  
DRAWINGS HAS BEEN RELEASED FOR FABRI-  
CATION. PLEASE REVIEW THE ATTACHED  
DRAWINGS AND DETERMINE IF THEY CON-  
FORM TO YOUR REQUIREMENTS. IF THERE IS  
A DISCREPANCY PLEASE ADVISE US AT ONCE.

Accessories

Items checked are to be furnished.

- ☒ FLANGED INLET. Fits ANSI 150 pipe flanges.
- ☐ VENTURI INLET, with guard.
- ☐ PLAIN PIPE INLET.
- ☐ STEEL WHEEL.
- ☒ DRAIN, 1" tank flanges (less plug).
- ☐ WAFER OUTLET DAMPER, TYPE BW, per drawing \_\_\_\_\_.
- ☐ WAFER OUTLET DAMPER, TYPE BL, per drawing \_\_\_\_\_.
- ☐ FLEXIBLE CONNECTOR, per drawing \_\_\_\_\_.
- ☐ INLET FILTER, per drawing \_\_\_\_\_.
- ☐ ISOLATION, per drawing \_\_\_\_\_.
- ☐ SILENCER, per drawing \_\_\_\_\_.
- ☒ FLUSH BOLTED CLEANOUT DOOR, located at 3 O'clock.
- ☐ \_\_\_\_\_TYPE SPARK RESISTANT CONSTRUCTION.
- ☐ SHAFT SEAL, CERAMIC FELT.
- ☐ POSITIVE SCREW ADJUSTMENT.
- ☒ WEATHER COVER BELT GUARD.
- ☐ TEFLON SHAFT HOLE CLOSURE.
- ☐ 201°F thru 500°F HEAT FAN.
- ☐ 501°F thru 600°F HEAT FAN.
- WITH: DRAIN PLUG.
- : NOMINALLY AIRTIGHT CONSTRUCTION.
- : GROUP IV COATINGS, HERESITE VR-504-BROWN, CC86, ON AIRSTREAM SURFACES.
- : ADD TO FURNISH SST KEYSTOCK IN LIEU OF THE STD. AT WHEEL AND DRIVE END.

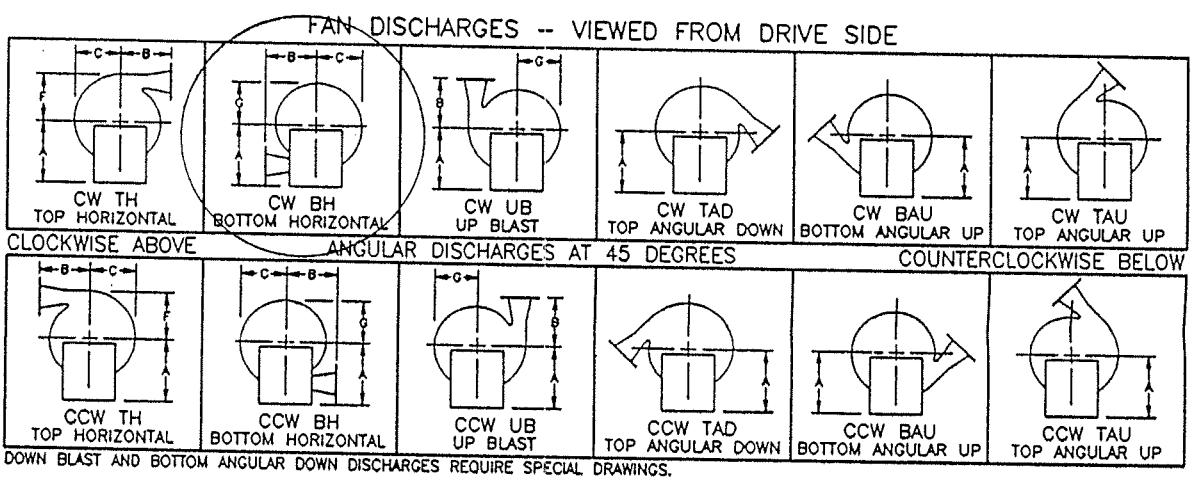
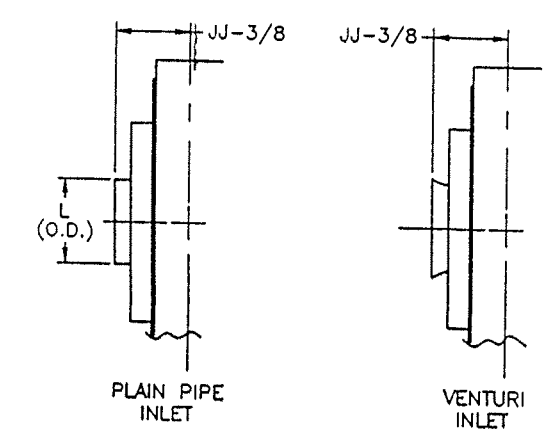
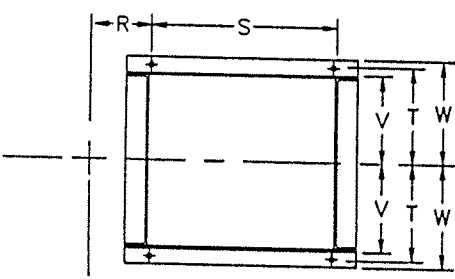


PRESSURE BLOWERS ARE ROTATABLE IN THE FIELD.

FURNISHED WITH FLANGED OUTLET WHICH FITS ANSI 150 PIPE FLANGES.

MAXIMUM TEMPERATURE:  
STANDARD FAN -----200°F  
HEAT FAN -----600°F

ALL HEAT FANS INCLUDE A SHAFT COOLER, GUARD, AND MOTOR HEAT SHIELD. A STEEL WHEEL IS REQUIRED ABOVE 200°F. HIGH-TEMP. PAINT IS USED ABOVE 500°F.



TOLERANCE: ±1/8"

DIMENSIONS (IN INCHES)

WHEEL DIAMETER	A	C	DD	E	F	G	K	N	S	T	V	W	SHAFT DIAMETER	KEYWAY	BASE HOLES
14 THRU 18	21	13 5/8	11 3/4	12	14 3/8	12 3/4	3 1/2	22	17 5/16	9 3/8	8 1/4	10 1/4	1 7/16	3/8	9/16
19 THRU 22	27 5/8	16 1/2	14 7/8	14 1/2	17 1/2	15 1/2	4 1/2	26	19 7/8	12 1/4	11	13	1 7/16	3/8	3/4
23 THRU 26	27 7/8	19 1/2	17 5/8	17 1/8	20 5/8	18 1/4	4 1/2	26	19 7/8	12 1/4	11	13	1 11/16	3/8	3/4

WHEEL DIAMETER	OUTLET DIA.	B	H	JJ	L	M	R	FLANGES (I.D.)	
								OUTLET	INLET
14 THRU 18	4	18 1/4	31 1/8	5 5/8	6 5/8	3 7/8	4 5/16	4	6
15 THRU 18	6	18 1/4	33 1/2	6 3/4	8 5/8	6 1/4	5 1/2	6	8
19 THRU 22	8	18 1/4	33 1/2	6 3/4	8 5/8	6 1/4	5 1/2	8	8
	4	17 3/4	36 1/8	6 1/8	6 5/8	3 7/8	5 1/16	4	6
	6	17 3/4	36 1/8	6 1/8	6 5/8	3 7/8	5 1/16	6	6
	8	17 3/4	38	6 3/4	8 5/8	6 1/4	6 1/4	8	8
23 THRU 26	10	21 3/4	38	6 3/4	8 5/8	6 1/4	6 1/4	8	8
	6	19	37 5/8	7	8 5/8	5	6 5/8	6	8
	8	19	37 5/8	7	8 5/8	5	6 5/8	8	8
	10	23	39	7 1/4	10 3/4	7 1/4	6 3/4	10	10
	12	23	39	7 1/4	10 3/4	7 1/4	6 3/4	12	12

FLANGE DIMENSIONS (OUTLET-INLET)				
I.D.	B.C.	O.D.	HOLES*	
			NO.	DIA.
4	7 1/2	9	8	3/4
6	9 1/2	11	8	7/8
8	11 3/4	13 1/2	8	7/8
10	14 1/4	16	12	1
12	17	19	12	1

\*HOLES STRADDLE THE CENTERLINES

WHEEL DIAMETER	MAX. MOTOR LIMITATIONS		
	MOTOR FRAME		LENGTH C-NW
	OPEN	TE	
4 THRU 18	215T	215T	16 5/8
9 THRU 22	256T	254T	18 5/8
3 THRU 26	256T	254T	18 5/8

• SIZE NOMENCLATURE (5 DIGITS)  
FIRST & SECOND - Wheel Dia.  
THIRD & FOURTH - Outlet Dia. (I.D.)  
FIFTH (LETTER) -- Wheel Type:  
A = Aluminum  
S = Steel Or Stainless Steel

DIMENSIONS SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS CERTIFIED.

DATE 05-11-95 CERTIFIED ikm kw CONTROL NO. 100

CUSTOMER'S NO. \_\_\_\_\_

CUSTOMER'S NAME CALMAT PROPERTIES

TAG B1

MOTOR BY nyb MTG. BY nyb DRIVE BY nyb

FAN DATA							
SIZE •	QTY.	DISCHARGE	CFM	SP	BHP	°F	RPM
2308A	1	CW BH	1200	41.3	11.15	.07D.	3502

MOTOR DATA				DRIVE DATA			
RPM	HP	ELECTRICAL DATA	FRAME	BELTS	DRIVER	DRIVEN	CENTERS
1800	15	3-60-230/460V.	254T	3-AX55	8.2	4.0	18.45
MFG: BALDOR				TEHI			

CERTIFIED | FORM NO.  
DRAWING | B-38 A

**nyb** | The New York Blower Company  
7650 Quincy Street-Wilmette, IL 60521

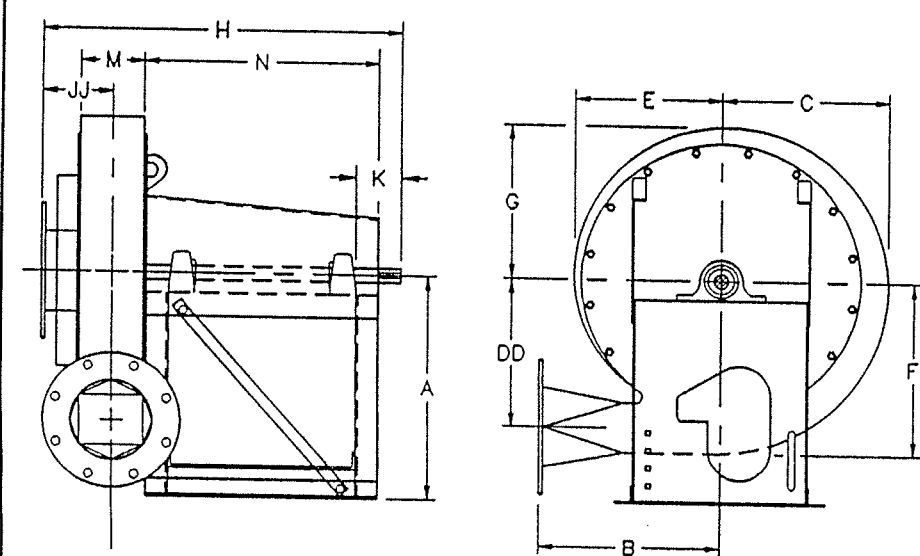
PRESSURE BLOWER  
ARRANGEMENT 10  
SIZES 14 THRU 26

DRAWING NUMBER  
FILE M-6677 DWG. 1

Accessories

Items checked are to be furnished.

- ☒ FLANGED INLET. Fits ANSI 150 pipe flanges.
- ☐ VENTURI INLET, with guard.
- ☐ PLAIN PIPE INLET.
- ☐ STEEL WHEEL.
- ☒ DRAIN, 1" tank flanges (less plug).
- ☐ WAFER OUTLET DAMPER, TYPE BW, per drawing \_\_\_\_\_.
- ☐ WAFER OUTLET DAMPER, TYPE BL, per drawing \_\_\_\_\_.
- ☐ FLEXIBLE CONNECTOR, per drawing \_\_\_\_\_.
- ☐ INLET FILTER, per drawing \_\_\_\_\_.
- ☐ ISOLATION, per drawing \_\_\_\_\_.
- ☐ SILENCER, per drawing \_\_\_\_\_.
- ☒ FLUSH BOLTED CLEANOUT DOOR, located at 3 O'clock.
- ☐ \_\_\_\_\_ TYPE SPARK RESISTANT CONSTRUCTION.
- ☐ SHAFT SEAL, CERAMIC FELT.
- ☐ POSITIVE SCREW ADJUSTMENT.
- ☒ WEATHER COVER BELT GUARD.
- ☐ TEFLON SHAFT HOLE CLOSURE.
- ☐ 201°F thru 500°F HEAT FAN.
- ☐ 501°F thru 600°F HEAT FAN.
- WITH: ☐ DRAIN PLUG.
- ☐ NOMINALLY AIRTIGHT CONSTRUCTION.
- ☐ GROUP IV COATINGS, HERESITE VR-504-BROWN, CC86, ON AIRSTREAM SURFACES.
- ☐ ADD TO FURNISH SST KEYSTOCK IN LIEU OF THE STD. AT WHEEL AND DRIVE END.

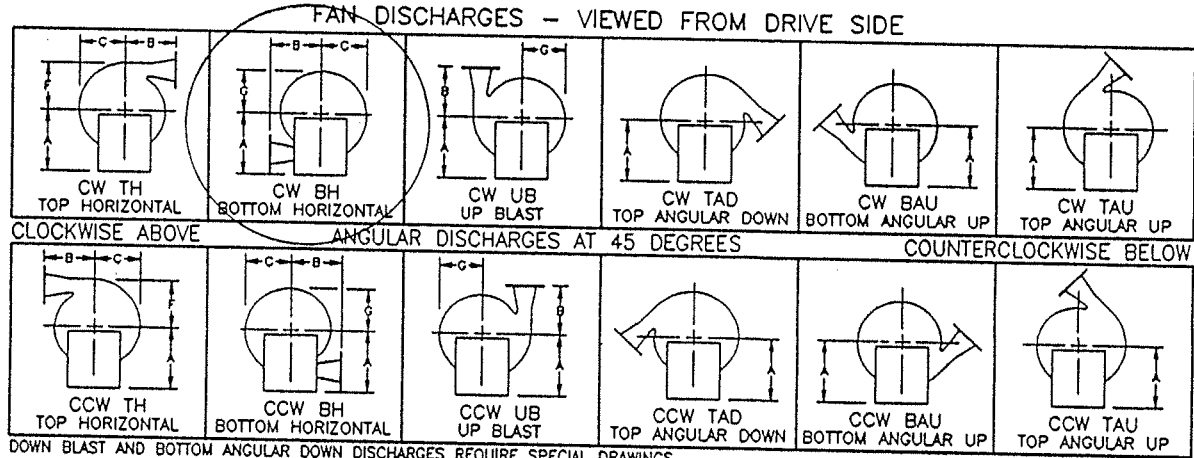
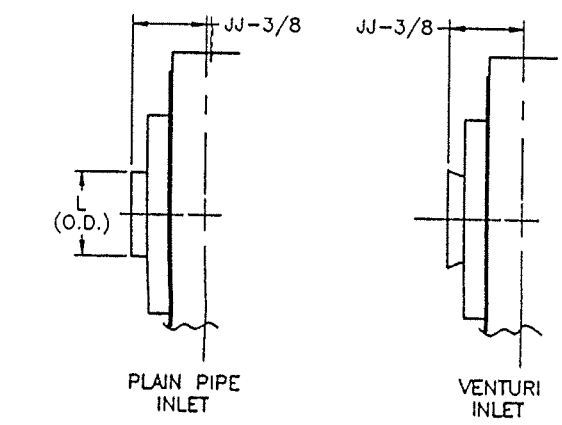
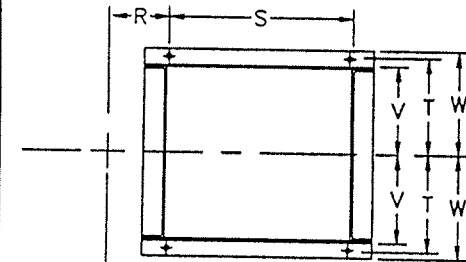


PRESSURE BLOWERS ARE ROTATABLE IN THE FIELD.

FURNISHED WITH FLANGED OUTLET WHICH FITS ANSI 150 PIPE FLANGES.

MAXIMUM TEMPERATURE:  
STANDARD FAN -----200°F  
HEAT FAN -----600°F

ALL HEAT FANS INCLUDE A SHAFT COOLER, GUARD, AND MOTOR HEAT SHIELD. A STEEL WHEEL IS REQUIRED ABOVE 200°F. HIGH-TEMP. PAINT IS USED ABOVE 500°F.



TOLERANCE: ± 1/8"

DIMENSIONS (IN INCHES)

WHEEL DIAMETER	A	C	DD	E	F	G	K	N	S	T	V	W	SHAFT DIAMETER	KEYWAY	BASE HOLES
14 THRU 18	21	13 5/8	11 3/4	12	14 3/8	12 3/4	3 1/2	22	17 5/16	9 3/8	8 1/4	10 1/4	1 7/16	3/8	9/16
19 THRU 22	27 5/8	16 1/2	14 7/8	14 1/2	17 1/2	15 1/2	4 1/2	26	19 7/8	12 1/4	11	13	1 7/16	3/8	3/4
23 THRU 26	27 7/8	19 1/2	17 5/8	17 1/8	20 5/8	18 1/4	4 1/2	26	19 7/8	12 1/4	11	13	1 11/16	3/8	3/4

WHEEL DIAMETER	OUTLET DIA.	B	H	JJ	L	M	R	FLANGES (I.D.)	
								OUTLET	INLET
14 THRU 18	4	18 1/4	31 1/8	5 5/8	6 5/8	3 7/8	4 5/16	4	6
15 THRU 18	6	18 1/4	33 1/2	6 3/4	8 5/8	6 1/4	5 1/2	6	8
19 THRU 22	8	18 1/4	33 1/2	6 3/4	8 5/8	6 1/4	5 1/2	8	8
	4	17 3/4	36 1/8	6 1/8	6 5/8	3 7/8	5 1/16	4	6
	6	17 3/4	36 1/8	6 1/8	6 5/8	3 7/8	5 1/16	6	6
	8	17 3/4	38	6 3/4	8 5/8	6 1/4	6 1/4	8	8
	10	21 3/4	38	6 3/4	8 5/8	6 1/4	6 1/4	10	10
23 THRU 26	6	19	37 5/8	7	8 5/8	5	5 5/8	6	8
	8	19	37 5/8	7	8 5/8	5	5 5/8	8	8
	10	23	39	7 1/4	10 3/4	7 1/4	6 3/4	10	10
	12	23	39	7 1/4	10 3/4	7 1/4	6 3/4	12	12

FLANGE DIMENSIONS (OUTLET-INLET)			
I.D.	B.C.	O.D.	HOLES* NO. DIA.
4	7 1/2	9	8 3/4
6	9 1/2	11	8 7/8
8	11 3/4	13 1/2	8 7/8
10	14 1/4	16	12 1
12	17	19	12 1

WHEEL DIAMETER	MAX. MOTOR LIMITATIONS	
	MOTOR FRAME	LENGTH
	OPEN	TE C-NW
14 THRU 18	215T	215T 16 5/8
19 THRU 22	256T	254T 18 5/8
23 THRU 26	256T	254T 18 5/8

• SIZE NOMENCLATURE (5 DIGITS)  
FIRST & SECOND - Wheel Dia.  
THIRD & FOURTH - Outlet Dia. (I.D.)  
FIFTH (LETTER) - Wheel Type;  
A = Aluminum  
S = Steel Or Stainless Steel

DIMENSIONS SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS CERTIFIED.

DATE 05-11-95 CERTIFIED ikm kw CONTROL NO. 100

CUSTOMER'S NO. \_\_\_\_\_  
CUSTOMER'S NAME CALMAT PROPERTIES  
TAG B1  
MOTOR BY nyb MTG. BY nyb DRIVE BY nyb

CERTIFIED FORM NO. DRAWING B-38 A

nyb The New York Blower Company  
7660 Quincy Street-Willowbrook, IL 60521

SIZE •	QTY.	DISCHARGE	CFM	SP	BHP	°F	RPM
2308A	1	CW BH	1200	41.3	11.15	.07D.	3502

MOTOR DATA				DRIVE DATA			
RPM	HP	ELECTRICAL DATA	FRAME	BELTS	DRIVER	DRIVEN	CENTERS
1800	15	3-60-230/460V.	254T	3-AX55	8.2	4.0	18.45
MFG: BALDOR				TEHI			

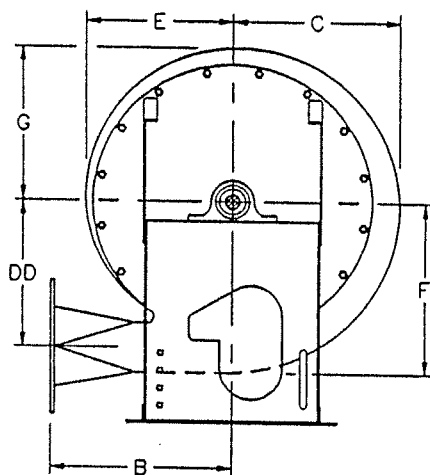
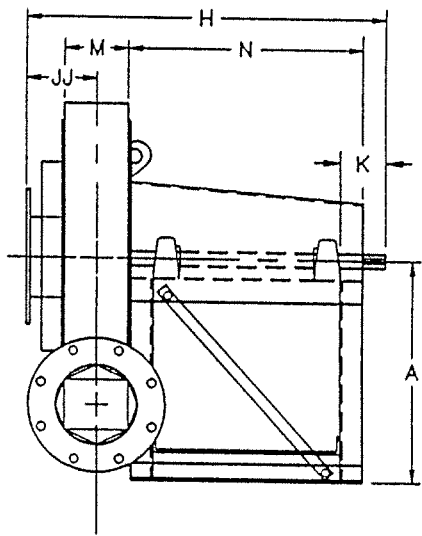
PRESSURE BLOWER ARRANGEMENT 10 SIZES 14 THRU 26

DRAWING NUMBER  
FILE M-6677 DWG. 1

Accessories

Items checked are to be furnished.

- ☒ FLANGED INLET. Fits ANSI 150 pipe flanges.
- ☐ VENTURI INLET, with guard.
- ☐ PLAIN PIPE INLET.
- ☐ STEEL WHEEL.
- ☒ DRAIN, 1" tank flanges (less plug).
- ☐ WAFER OUTLET DAMPER, TYPE BW, per drawing \_\_\_\_\_.
- ☐ WAFER OUTLET DAMPER, TYPE BL, per drawing \_\_\_\_\_.
- ☐ FLEXIBLE CONNECTOR, per drawing \_\_\_\_\_.
- ☐ INLET FILTER, per drawing \_\_\_\_\_.
- ☐ ISOLATION, per drawing \_\_\_\_\_.
- ☐ SILENCER, per drawing \_\_\_\_\_.
- ☒ FLUSH BOLTED CLEANOUT DOOR, located at 3 O'clock.
- ☐ \_\_\_\_\_ TYPE SPARK RESISTANT CONSTRUCTION.
- ☐ SHAFT SEAL, CERAMIC FELT.
- ☐ POSITIVE SCREW ADJUSTMENT.
- ☒ WEATHER COVER BELT GUARD.
- ☐ TEFLON SHAFT HOLE CLOSURE.
- ☐ 201°F thru 500°F HEAT FAN.
- ☐ 501°F thru 600°F HEAT FAN.
- WITH: ☐ DRAIN PLUG.
- ☐ NOMINALLY AIRTIGHT CONSTRUCTION.
- ☐ GROUP IV COATINGS, HERESITE VR-504-BROWN, CC86, ON AIRSTREAM SURFACES.
- ☐ ADD TO FURNISH SST KEYSTOCK IN LIEU OF THE STD. AT WHEEL AND DRIVE END.

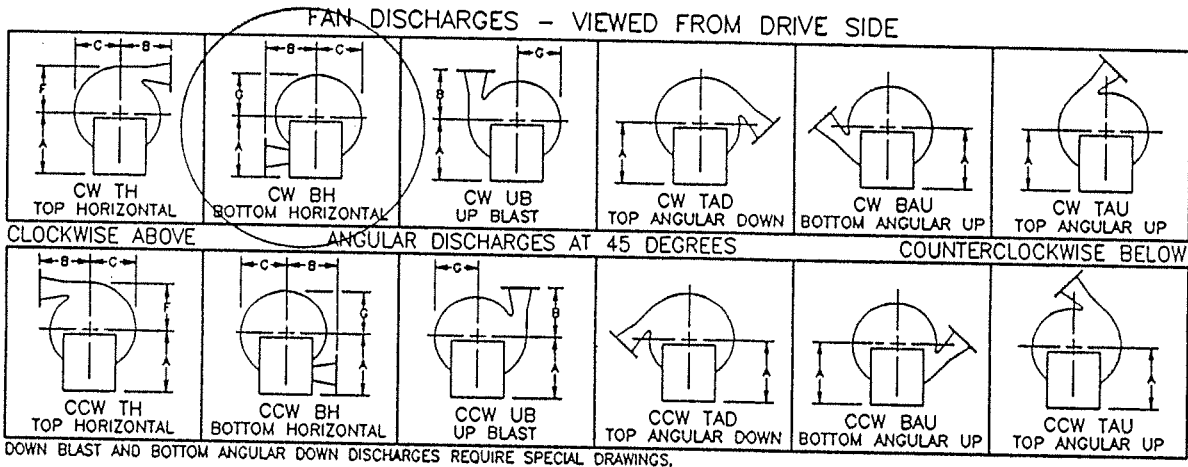
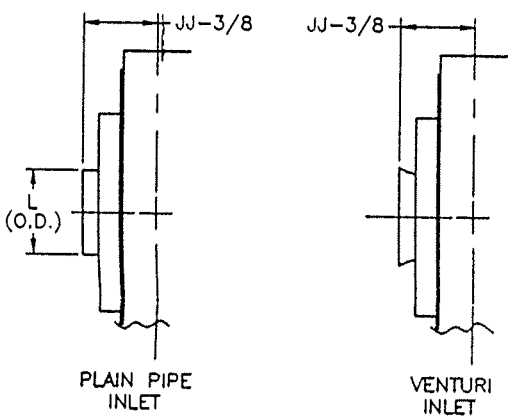
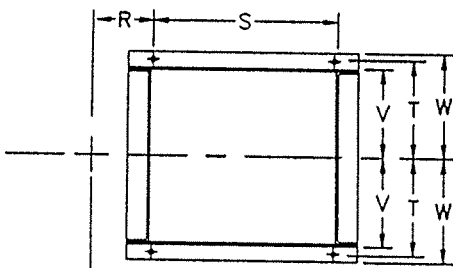


PRESSURE BLOWERS ARE ROTATABLE IN THE FIELD.

FURNISHED WITH FLANGED OUTLET WHICH FITS ANSI 150 PIPE FLANGES.

MAXIMUM TEMPERATURE:  
STANDARD FAN -----200°F  
HEAT FAN -----600°F

ALL HEAT FANS INCLUDE A SHAFT COOLER, GUARD, AND MOTOR HEAT SHIELD. A STEEL WHEEL IS REQUIRED ABOVE 200°F. HIGH-TEMP. PAINT IS USED ABOVE 500°F.



TOLERANCE: ± 1/8"

DIMENSIONS (IN INCHES)

WHEEL DIAMETER	A	C	DD	E	F	G	K	N	S	T	V	W	SHAFT DIAMETER	KEYWAY	BASE HOLES
14 THRU 18	21	13 5/8	11 3/4	12	14 3/8	12 3/4	3 1/2	22	17 5/16	9 3/8	8 1/4	10 1/4	1 7/16	3/8	9/16
19 THRU 22	27 5/8	16 1/2	14 7/8	14 1/2	17 1/2	15 1/2	4 1/2	26	19 7/8	12 1/4	11	13	1 7/16	3/8	3/4
23 THRU 26	27 7/8	19 1/2	17 5/8	17 1/8	20 5/8	18 1/4	4 1/2	26	19 7/8	12 1/4	11	13	1 11/16	3/8	3/4

WHEEL DIAMETER	OUTLET DIA.	B	H	JJ	L	M	R	FLANGES (I.D.)	
								OUTLET	INLET
14 THRU 18	4	18 1/4	31 1/8	5 5/8	6 5/8	3 7/8	4 5/16	4	6
15 THRU 18	6	18 1/4	33 1/2	6 3/4	8 5/8	6 1/4	5 1/2	6	8
19 THRU 22	4	17 3/4	36 1/8	6 1/8	6 5/8	3 7/8	5 1/16	4	6
19 THRU 22	6	17 3/4	36 1/8	6 1/8	6 5/8	3 7/8	5 1/16	6	6
19 THRU 22	8	17 3/4	38	6 3/4	8 5/8	6 1/4	6 1/4	8	8
19 THRU 22	10	21 3/4	38	6 3/4	8 5/8	6 1/4	6 1/4	10	10
23 THRU 26	6	19	37 5/8	7	8 5/8	5	5 5/8	6	8
23 THRU 26	8	19	37 5/8	7	8 5/8	5	5 5/8	8	8
23 THRU 26	10	23	39	7 1/4	10 3/4	7 1/4	6 3/4	10	10
23 THRU 26	12	23	39	7 1/4	10 3/4	7 1/4	6 3/4	12	12

FLANGE DIMENSIONS (OUTLET-INLET)			
I.D.	B.C.	O.D.	HOLES* NO. DIA.
4	7 1/2	9	8 3/4
6	9 1/2	11	8 7/8
8	11 3/4	13 1/2	8 7/8
10	14 1/4	16	12 1
12	17	19	12 1

\*HOLES STRADDLE THE CENTERLINES

WHEEL DIAMETER	MAX. MOTOR LIMITATIONS		
	MOTOR FRAME	TE	LENGTH C-NW
14 THRU 18	215T	215T	16 5/8
19 THRU 22	256T	254T	18 5/8
23 THRU 26	256T	254T	18 5/8

• SIZE NOMENCLATURE (5 DIGITS)  
FIRST & SECOND - Wheel Dia.  
THIRD & FOURTH - Outlet Dia. (I.D.)  
FIFTH (LETTER) - Wheel Type:  
A = Aluminum  
S = Steel Or Stainless Steel

DIMENSIONS SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS CERTIFIED.

DATE 05-11-95 CERTIFIED ikm kw CONTROL NO. 100

CUSTOMER'S NO. \_\_\_\_\_  
CUSTOMER'S NAME CALMAT PROPERTIES  
TAG B1  
MOTOR BY nyb MTG. BY nyb DRIVE BY nyb

FAN DATA

SIZE •	QTY.	DISCHARGE	CFM	SP	BHP	°F	RPM
2308A	1	CW BH	1200	41.3	11.15	.07D.	3502

MOTOR DATA

RPM	HP	ELECTRICAL DATA	FRAME
1800	15	3-60-230/460V.	254T
MFG: BALDOR			TEHI

DRIVE DATA

BELTS	DRIVER	DRIVEN	CENTERS
3-AX55	8.2	4.0	18.45

CERTIFIED FORM NO. DRAWING B-38 A

nyb The New York Blower Company  
7660 Quincy Street-Willowbrook, IL 60521

PRESSURE BLOWER  
ARRANGEMENT 10  
SIZES 14 THRU 26

DRAWING NUMBER

FILE M-6677 DWG. 1

To determine Performance  
at another RPM multiply

CFM  $\times K$

SP  $\times K^2$

BHP  $\times K^3$

where K is new RPM divided  
by RPM shown at right.

DATE : May 10 1995

PERFORMANCE OPTIONS :

CUST. NO :

CUSTOMER : CALMAT PROPERTIES

TAGGING : B1

FAN TYPE : Pressure Blower - AL

FAN SIZE : 2308A

CFM : 1200

SP : 41.3

RPM : 3502

BHP : 11.15

TEMP : 100

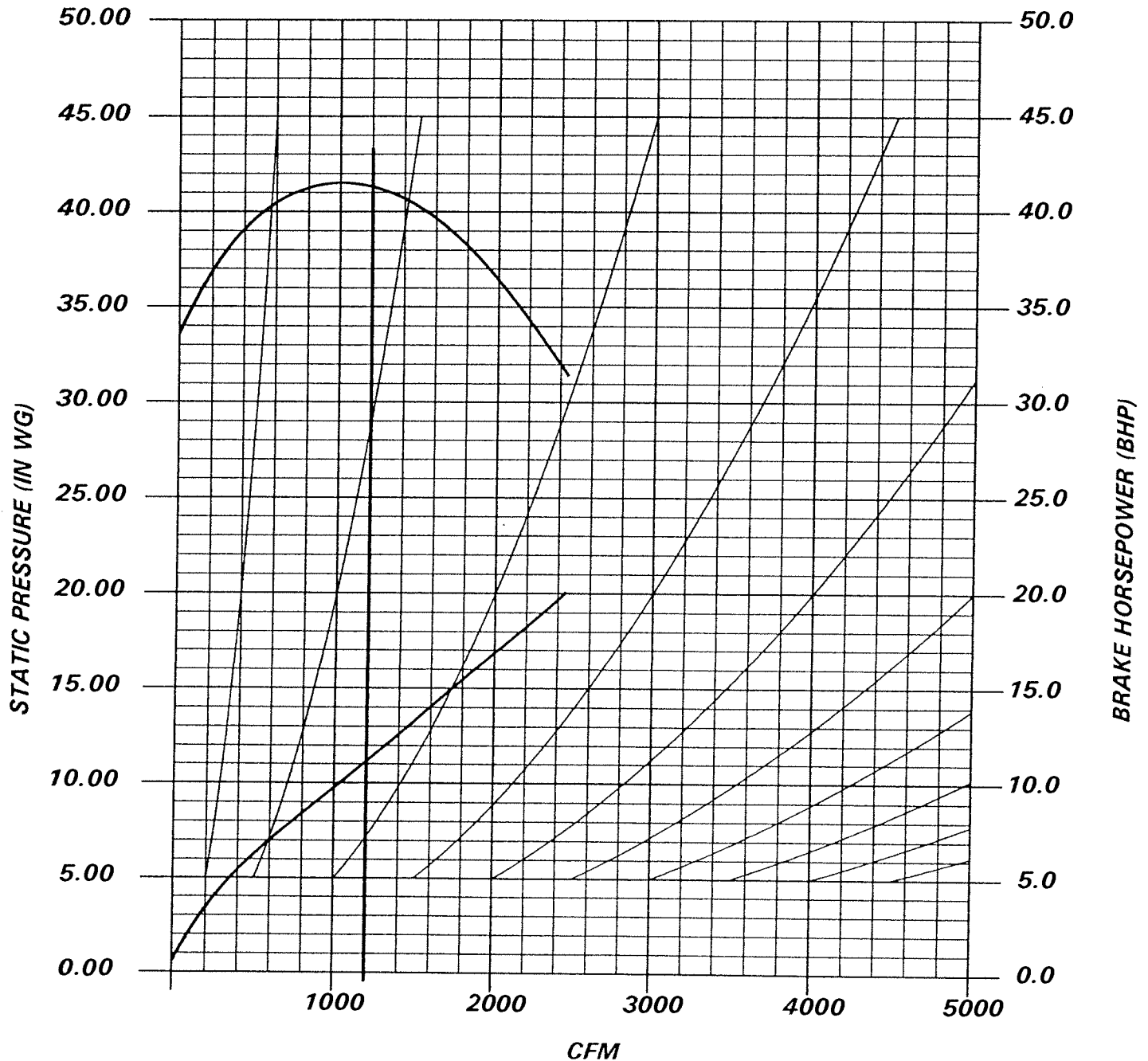
deg F

DENS : 0.070

LB/FT<sup>3</sup>

FILE : M06677 - 100

JKM



To determine Performance at another RPM multiply

CFM  $\times K$

SP  $\times K^2$

BHP  $\times K^3$

where K is new RPM divided by RPM shown at right.

DATE : May 10 1995

PERFORMANCE OPTIONS :

CUST. NO :

CUSTOMER : CALMAT PROPERTIES

TAGGING : B1

FAN TYPE : Pressure Blower - AL

FAN SIZE : 2308A

CFM : 1200

SP : 41.3

RPM : 3502

BHP : 11.15

TEMP : 100

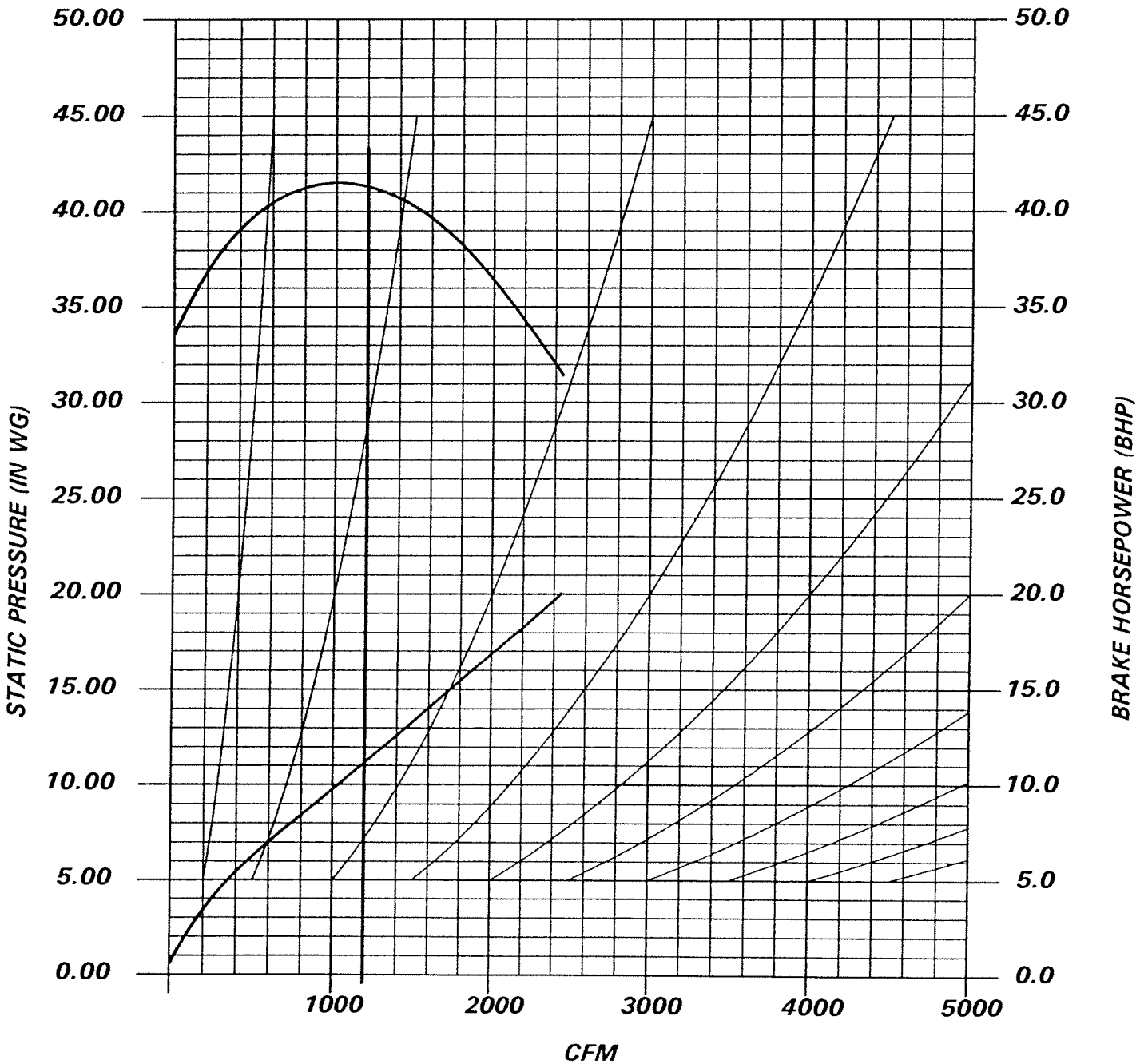
deg F

DENS : 0.070

LB/FT<sup>3</sup>

FILE : M06677 - 100

JKM



To determine Performance  
at another RPM multiply

CFM  $\times K$

SP  $\times K^2$

BHP  $\times K^3$

where K is new RPM divided  
by RPM shown at right.

DATE : May 10 1995

PERFORMANCE OPTIONS :

CUST. NO :

CUSTOMER : CALMAT PROPERTIES

TAGGING : B1

FAN TYPE : Pressure Blower - AL

FAN SIZE : 2308A

CFM : 1200

SP : 41.3

RPM : 3502

BHP : 11.15

TEMP : 100

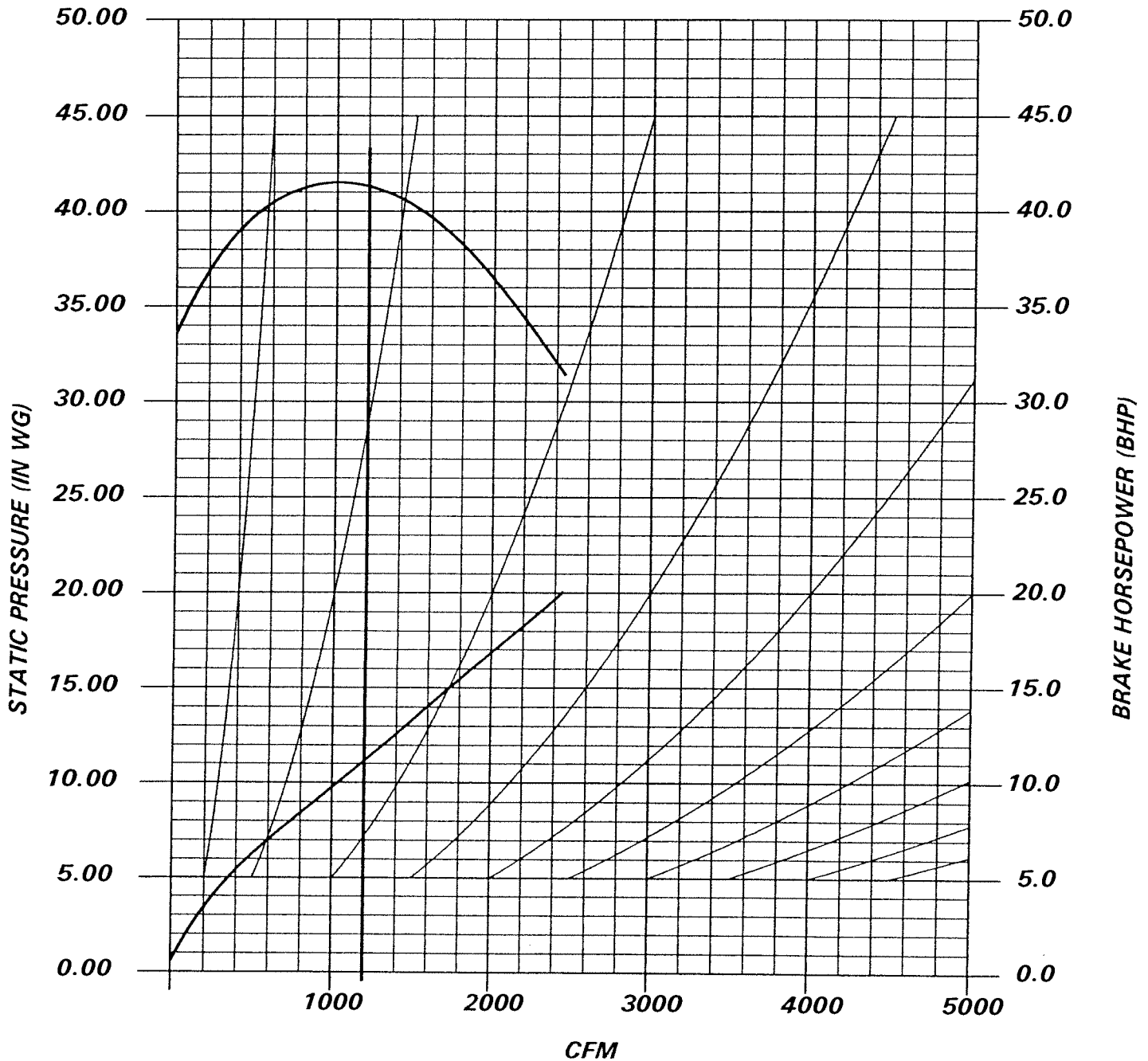
deg F

DENS : 0.070

LB/FT<sup>3</sup>

FILE : M06677 - 100

JKM



To determine Performance  
at another RPM multiply

CFM  $\times K$

SP  $\times K^2$

BHP  $\times K^3$

where K is new RPM divided  
by RPM shown at right.

DATE : May 10 1995

PERFORMANCE OPTIONS :

CUST. NO :

CUSTOMER : CALMAT PROPERTIES

TAGGING : B1

FAN TYPE : Pressure Blower - AL

FAN SIZE : 2308A

CFM : 1200

SP : 41.3

RPM : 3502

BHP : 11.15

TEMP : 100

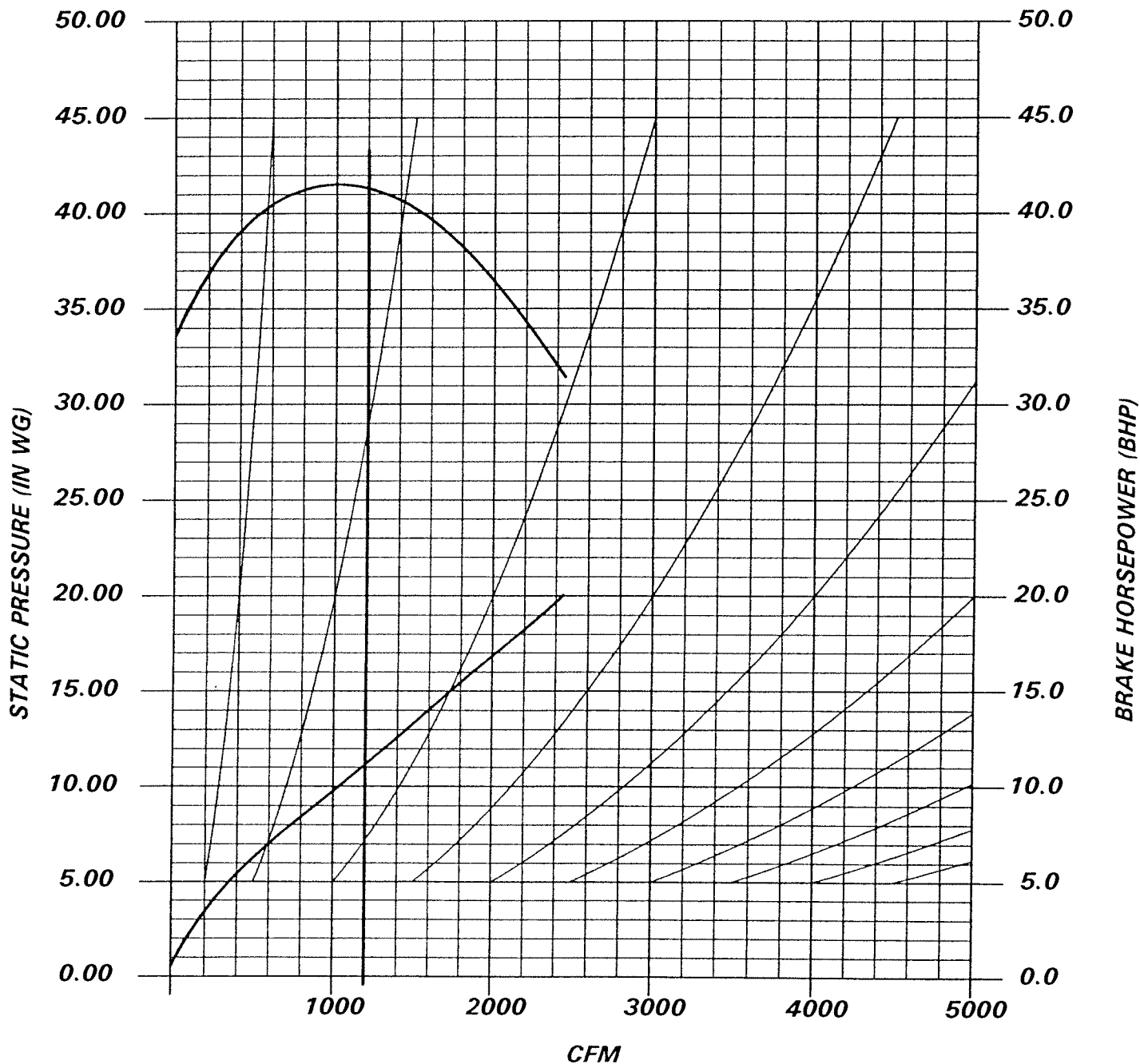
deg F


DENS : 0.070

LB/FT<sup>3</sup>

FILE : M06677 - 100

JKM



 <p>The <b>New York Blower</b> Company®</p> <p>7660 QUINCY STREET — WILLOWBROOK, ILLINOIS 60521-5596</p>	<p><b>INSTALLATION MAINTENANCE, OPERATING INSTRUCTIONS</b></p>	<p><b>IM-140</b></p>
---	--	----------------------

## PRESSURE BLOWERS

### CAUTION

**THIS MACHINE HAS MOVING PARTS THAT CAN CAUSE SERIOUS BODILY INJURY. BEFORE OPERATING OR PERFORMING MAINTENANCE, THE FOLLOWING PRECAUTIONS MUST BE TAKEN.**

- 1. MAKE SURE ALL MOVING PARTS ARE SHIELDED FROM PERSONNEL AND FALLING OBJECTS.**
- 2. READ THE INSTALLATION AND MAINTENANCE INSTRUCTIONS, AS WELL AS THE RECOMMENDED SAFETY PRACTICES MANUAL FURNISHED WITH THIS UNIT.**
- 3. DO NOT OPERATE AT SPEEDS OR TEMPERATURES HIGHER THAN PUBLISHED FOR THE SPECIFIC OPERATING CONDITIONS FOR WHICH THE MACHINE WAS PURCHASED.**

**A FAILURE TO TAKE THESE PRECAUTIONS COULD RESULT IN SERIOUS BODILY INJURY AND PROPERTY DAMAGE.**

98-0250

#### A WORD ABOUT SAFETY

The above **CAUTION** decal appears on all **nyb** fans. Air moving equipment involves electrical wiring, moving parts, and air velocity or pressure which can create safety hazards if the equipment is not properly installed, operated and maintained. To minimize this danger, follow these instructions as well as the additional instructions and warnings on the equipment itself.

All installers, operators and maintenance personnel should study AMCA Publication 410, "Recommended Safety Practices for Air Moving Devices", which is included as part of every shipment. Additional copies can be obtained by writing to The New York Blower Company, 7660 Quincy Street, Willowbrook, IL 60521-5596.

#### ELECTRICAL DISCONNECTS

Every motor driven fan should have an independent disconnect switch to isolate the unit from the electrical supply. It should be near the fan and must be capable of being locked by maintenance personnel while servicing the unit, in accordance with OSHA procedures.

#### MOVING PARTS

All moving parts must have guards to protect personnel. Safety requirements vary, so the number and type of guards needed to meet company, local and OSHA standards must be determined and specified by the user. Never start a fan without having all safety guards installed. Check regularly for damaged or missing guards and do not operate any fan with guards removed. Fans can also become dangerous because of potential "windmilling," even though all electrical power is disconnected. Always block the rotating assembly before working on any moving parts.

#### AIR PRESSURE AND SUCTION

In addition to the normal dangers of rotating machinery, fans present another hazard from the suction created at the fan inlet. This suction can draw materials into the fan where they become high velocity projectiles at the outlet. It can also be extremely dangerous to persons in close proximity to the inlet, as the forces involved can overcome the strength of most individuals. Inlets and outlets that are not ducted should be screened to prevent entry and discharge of solid objects.

#### ACCESS DOORS

### DANGER

**DO NOT OPEN UNTIL THE POWER SUPPLY HAS BEEN LOCKED OFF AND THE SHAFT HAS STOPPED ROTATING.**

**FAILURE TO DO THIS CAN RESULT IN SERIOUS BODILY INJURY.**

98-0249

The above **DANGER** decal is placed on all **nyb** cleanout doors. These doors, as well as access doors to the duct system, should never be opened while the fan is in operation. Serious injury could result from the effects of air pressure or suction.

Bolted doors must have the door nuts or fasteners securely tightened to prevent accidental or unauthorized opening.

## RECEIVING AND INSPECTION

The fan and accessories should be inspected on receipt for any shipping damage. Turn the wheel by hand to see that it rotates freely and does not bind. If dampers are provided, check these accessories for free operation of all moving parts.

F.O.B. factory shipping terms require that the receiver be responsible for inspecting the equipment upon arrival. Note damage or shortages on the Bill of Lading and file any claims for damage or loss in transit. **nyb** will assist the customer as much as possible; however, claims must be originated at the point of delivery.

## HANDLING AND STORAGE

Fans should be lifted by the base, mounting supports, or lifting eyes only. Never lift a fan by the wheel, shaft, motor, motor bracket, housing inlet, outlet, or any fan part not designed for lifting. A spreader should always be used to avoid damage.

On a direct drive Arrangement 8 fan, lifting holes are provided in the motor base to assist in handling the fan assembly. These lifting holes should be used in conjunction with the lifting eyes when lifting and positioning the fan onto its foundation. A heavy round steel bar or appropriate fixture can be passed through the lifting holes to simplify attachment of the lifting device. Be sure to follow all local safety codes when moving heavy equipment.

Whenever possible, fans and accessories should be stored in a clean, dry location to prevent rust and corrosion of steel components. If outdoor storage is necessary, protection should be provided. Cover the inlet and outlet to prevent the accumulation of dirt and moisture in the housing. Cover motors with waterproof material. Refer to the bearing section for further storage instructions.

Check dampers for free operation and lubricate moving parts prior to storage. Inspect the stored unit periodically. Rotate the wheel by hand every two weeks to redistribute grease on internal bearing parts.

## FAN INSTALLATION

**nyb** wheels are dynamically balanced when fabricated. Complete fans are test run at operating speeds to check the entire assembly for conformance to **nyb** vibration limits. Nevertheless, all units must be adequately supported for smooth operation. Ductwork or stacks should be independently supported as excess weight may distort the fan housing and cause contact between moving parts. Where vibration isolators are used, consult the certified drawing for proper location and adjustment.

### Slab-Mounted Units

A correctly designed and level concrete foundation provides the best means of installing floor-mounted fans. The mass of the base must maintain the fan/driver alignment, absorb normal vibration, and resist lateral loads. The overall dimensions of the concrete base should extend at least six inches beyond the base of the fan. The weight of the slab should be two to three times the weight of the rotating assembly, including the motor. The foundation requires firmly anchored fasteners such as the anchor bolts shown in Figure 1.

Move the fan to the mounting location and lower it over the anchor bolts, leveling the fan with shims around the bolts. Fasten the fan securely. When grout is used, shim the fan at least 3/4-inch from the concrete base. (See Figure 1.) When isolation is used, check the **nyb** certified drawing for installation instructions.

## Elevated Units

When an elevated or suspended structural steel platform is used, it must have sufficient bracing to support the unit load and prevent side sway. The platform should be of welded construction to maintain permanent alignment of all members.

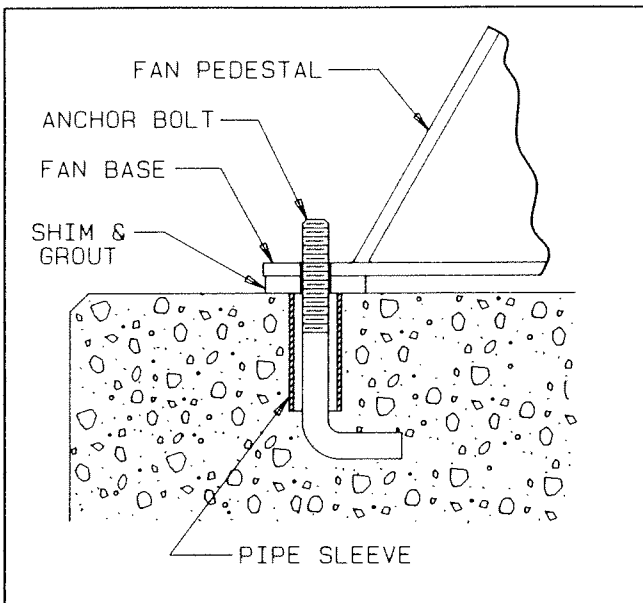


Figure 1  
V-BELT DRIVE

### Installation

1. Remove all foreign material from the fan and motor shafts. Coat shafts with machine oil for easier mounting. Mount the belt guard backplate at this time if partial installation is required prior to sheave mounting.
2. Mount sheaves on shafts after checking sheave bores and bushings for nicks or burrs. Avoid using force. If resistance is encountered, lightly polish the shaft with crocus cloth until the sheave slides on freely. Tighten tapered bushing bolts sequentially so that equal torque is applied to each.
3. Adjust the motor on its base to a position closest to the fan shaft. Install belts by working each one over the sheave grooves until all are in position. Never pry the belts into place. On **nyb** packaged fans, sufficient motor adjustment is provided for easy installation of the proper size belts.
4. Adjust sheaves and the motor shaft angle so that the sheave faces are in the same plane. Check this by placing a straightedge across the faces of the sheaves. Any gap between the edge and sheave faces indicates misalignment. Important: This method is only valid when the width of the surface between the belt edge and the sheave face is the same for both sheaves. When they are not equal, or when using adjustable-pitch sheaves, adjust so that all belts have approximately equal tension. Both shafts should be at the right angles to the center belt.

### Belt Tensioning

1. Check belt tension with a tensioning gage and adjust using the motor slide base. Excess tension shortens bearing life while insufficient tension shortens belt life, can reduce fan performance and may cause vibration. The lowest allowable tension is that which prevents slippage under full load. Belts may slip during startup, but slipping should stop as soon as the fan reaches full speed. For more precise tensioning methods, consult the drive manufacturer's literature.

2. Recheck setscrews, rotate the drive by hand and check for rubbing, then complete the installation of the belt guard.
3. Belts tend to stretch somewhat after installation. Recheck tension after several days of operation. Check sheave alignment as well as setscrew and/or bushing bolt tightness.

## COUPLING

Coupling alignment should be checked after installation and prior to start up. Alignment is set at the factory, but shipping, handling and installation can cause misalignment. Also check for proper coupling lubrication. For details on lubrication and for alignment tolerances on the particular coupling supplied, see the manufacturer's installation and maintenance supplement in the shipping envelope.

### Installation

Most **nyb** fans are shipped with the coupling installed. In cases where the drive is assembled after shipping, install the coupling as follows:

1. Remove all foreign material from fan and motor shafts and coat with machine oil for easy mounting of coupling halves.
2. Mount the coupling halves on each shaft, setting the gap between the faces specified by the manufacturer. Avoid using force. If mounting difficulty is encountered, lightly polish the shaft with crocus cloth until the halves slide on freely.

### Alignment

1. Align the coupling to within the manufacturer's limits for parallel and angular misalignment (see Figure 2). A dial indicator can also be used for alignment where greater precision is desired. Adjustments should be made by moving the motor to change shaft angle, and by the use of foot shims to change motor shaft height. Do not move the fan shaft or bearing.
2. When correctly aligned, install the flexible element and tighten all fasteners in the coupling and motor base. Lubricate the coupling if necessary.
3. Recheck alignment and gap after a short period of operation, and recheck the tightness of all fasteners in the coupling assembly.

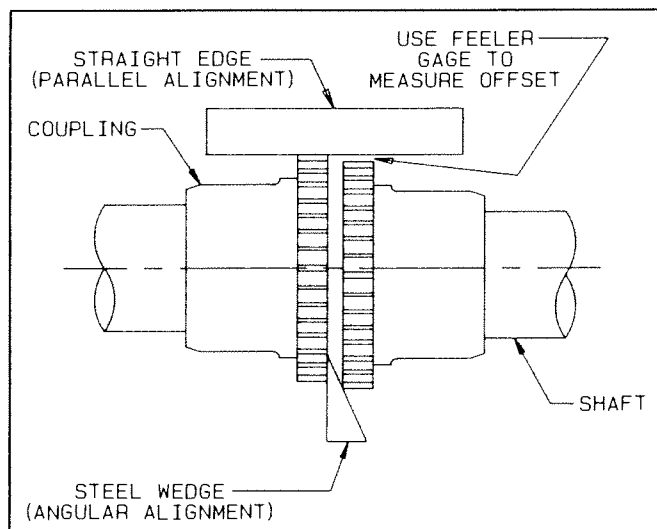


Figure 2

## START-UP

Safe operation and maintenance includes the selection and use of appropriate safety accessories for the specific installation. This is the responsibility of the system designer and requires consideration of equipment location and accessibility as well as adjacent components. All safety accessories must be installed properly prior to start up.

Safe operating speed is a function of system temperature and wheel design. Do not under any circumstances exceed the maximum safe fan speed published in the **nyb** bulletin, which is available from your **nyb** field sales representative.

### Procedure

1. If the drive components are not supplied by **nyb**, verify with the manufacturer that the starting torque is adequate for the speed and inertia of the fan.
2. Inspect the installation prior to starting the fan. Check for any loose items or debris that could be drawn into the fan or dislodged by the fan discharge. Check the interior of the fan as well. Turn the wheel by hand to check for binding.
3. Check drive installation and belt tension.
4. Check the tightness of all setscrews, nuts and bolts. **Wheel bushing bolts should be torqued to 9 lb.-ft.** When furnished, tighten hub setscrews with the wheel oriented so that the setscrew is positioned underneath the shaft.
5. Install all remaining safety devices and guards. Verify that the supply voltage is correct and wire the motor. "Bump" the starter to check for proper wheel rotation.
6. Use extreme caution when testing the fan with ducting disconnected. Apply power and check for unusual sounds or excessive vibration. If either exists, see the section on Common Fan Problems. To avoid motor overload, do not run the fan for more than a few seconds if ductwork is not fully installed. On larger fans, normal operating speed may not be attained without motor overload unless ductwork is attached. Check for correct fan speed and complete the installation. Ductwork and guards must be fully installed for safety.
7. Setscrews should be rechecked after a few minutes, eight hours and two weeks of operation (see Tables 1 & 2 for correct tightening torques).

### WHEEL SETSCREW TORQUES

Setscrew Size Diameter (in.)	Carbon Steel Setscrew Torque*	
	lb.-in.	lb.-ft.
1/2"	600	50

Table 1

\* Stainless Steel setscrews are not hardened and should not be tightened to more than 1/2 the values shown.

### BEARING SETSCREW TORQUE, lb.-in.

Setscrew Diameter	Manufacturer				
	Link-Belt	Sealmaster	SKF	McGill	Dodge
1/4"	90	65	50	85	---
5/16"	185	125	165	165	160

Table 2

Note: Split pillow block bearings are fixed to the shaft with tapered sleeves and generally do not have setscrews.

## FAN MAINTENANCE

**nyb** fans are manufactured to high standards with quality materials and components. Proper maintenance will ensure a long and trouble-free service life.

Do not attempt any maintenance on a fan unless the electrical supply has been completely disconnected and locked. In many cases, a fan can windmill despite removal of all electrical power. The rotating assembly should be blocked securely before attempting maintenance of any kind.

The key to good fan maintenance is regular and systematic inspection of all fan parts. Inspection frequency is determined by the severity of the application and local conditions. Strict adherence to an inspection schedule is essential.

Regular fan maintenance should include the following:

1. Check the fan wheel for any wear or corrosion, as either can cause catastrophic failures. Check also for the build up of material which can cause unbalance resulting in vibration, bearing wear and serious safety hazards. Clean or replace the wheel as required.

**NOTE: Shut the fan down immediately if there is any sudden increase in fan vibration.**

2. Check the V-belt drive for proper alignment and tension (see section on V-belt drives). If belts are worn, replace them as a set, matched to within manufacturer's tolerances. Lubricate the coupling of direct-drive units and check for alignment (see section on couplings).
3. Lubricate the bearings, but do not overlubricate (see the bearing section for detailed specifications).
4. Ceramic-felt shaft seals require no maintenance, although worn seals should be replaced. When lip-type shaft seals are provided, lubricate them with "NEVER-SEEZ" or other anti-seize compound.
5. During any routine maintenance, all setscrews and bolts should be checked for tightness. See the table for correct torques.
6. When installing a new wheel, the proper wheel-to-inlet clearance must be maintained (see Figure 3).

## WHEEL BALANCE

Airstreams containing particulate or chemicals can cause abrasion or corrosion of the fan parts. This wear is often uneven and can lead to significant wheel unbalance over time. When such wear is discovered, a decision must be made as to whether to rebalance or replace the wheel.

The soundness of all parts should be determined if the original thickness of components is reduced. Be sure there is no hidden structural damage. The airstream components should also be cleaned to remove any build up of foreign material. Specialized equipment can be used to rebalance a cleaned wheel that is considered structurally sound.

Balance weights should be rigidly attached at a point that will not interfere with the housing nor disrupt airflow. Remember that centrifugal forces can be extremely high at the outer radius of a fan wheel. Welding is the preferred method of balance weight attachment. Be sure to ground the welder directly to the fan wheel. Otherwise, the welding current could pass through the fan bearings and destroy them.

## WHEEL-INLET CLEARANCE

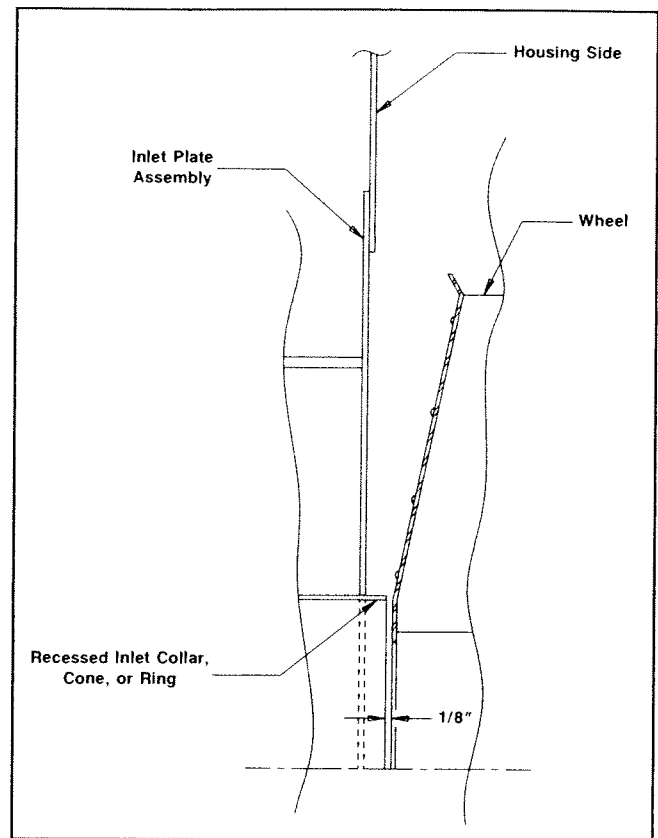


Figure 3

## BEARINGS

### Storage

Any stored bearing can be damaged by condensation caused by temperature variations. Therefore, **nyb** fan bearings are filled with grease at the factory to exclude air and moisture. Such protection is adequate for shipment and subsequent immediate installation.

For long term or outdoor storage, mounted bearings should be regreased and wrapped with plastic for protection. Rotate the fan wheel by hand at least every two weeks to redistribute grease on internal bearing parts. Each month the bearings should be purged with new grease to remove condensation, since even a filled bearing can accumulate moisture. Use caution when purging, as excessive pressure can damage the seals. Rotate the shaft while slowly adding grease.

### Operation

Check setscrew torque before startup (see table for correct values). Since bearings are completely filled with grease at the factory, they may run at an elevated temperature during initial operation. Surface temperatures may reach 180°F. and grease may bleed from the bearing seals. This is normal and no attempt should be made to replace lost grease. Bearing surface temperatures will decrease when the internal grease quantity reaches a normal operating level. Relubrication should follow the recommended schedule.

## Lubrication

Use the table for relubrication scheduling according to operating speed and shaft diameter. Bearings should be lubricated with a good quality lithium-based grease conforming to NLGI Grade 2 consistency. Examples are:

Mobil	—	Mobilith 22
Texaco	—	Premium RB
Standard Oil	—	Amolith #2
Gulf Oil	—	Gulf Crown #2
Shell	—	Alvania #2

Do not use "high temperature" greases, as many are not formulated for the high speeds associated with fan bearings.

Add grease to the bearing while running the fan or rotating the shaft by hand. Be sure all guards are in place if lubrication is performed while the fan is operating. Add just enough grease to cause a slight purging at the seals. Do not overlubricate.

Split pillowblock bearings (Link-Belt P-LB6800 & P-LB6900, SKF SAF 22500) should be cleaned and repacked at approximately every eighth lubrication interval. This requires removal of the bearing cap. Clean out old grease and repack the bearing with fresh grease. Pack the bearing fully and fill the housing reservoir to the bottom of the shaft on both sides of the bearing. Replace the bearing cap, being careful not to mix caps as they are not interchangeable from one bearing to another.

## BEARING LUBRICATION INTERVAL

[Months]

RPM Shaft	1-500	501-1000	1001-1500	1501-2000	2001-2500	2501-3000	3001-3500	3501-4000
1-7/16	6 6	6 4	5-6 4	4-6 2	4-6 2	3-5 1	2-4 1	2-4 1
1-11/16	6 6	6 4	4-6 2	4-6 1	2-4 1	2-4 1	2 1/2	1-2 1/2

All Sealmaster & McGill;  
Most Link-Belt and SKF.



Link-Belt 22400 Series,  
SKF SYR Series, and  
Dodge S-2000 Series.

### NOTE:

- These are general recommendations only; specific manufacturer's recommendations may vary slightly.
- Assumes clean environment, 0°F. to 120°F.
  - Consult The New York Blower Company for operation below 0°F. ambient.
  - Ambients greater than 120°F. may shorten bearing life.
  - Under extremely dirty conditions, lubricate more frequently.

## COMMON FAN PROBLEMS

### Excessive Vibration

A common complaint regarding industrial fans is "excessive vibration." **nyb** is careful to ensure that each fan is precisely balanced prior to shipment; however, there are many other causes of fan vibration including:

- Loose mounting bolts, setscrews, bearings or couplings.
- Misalignment or excessive wear of bearings.
- Misaligned or unbalanced motor.
- Bent shaft due to mishandling or material impact.
- Accumulation of foreign material on the wheel.
- Excessive wear or erosion of the wheel.
- Excessive system pressure or restriction of airflow due to closed dampers.
- Inadequate structural support, mounting procedures or materials.
- Externally transmitted vibration.

### Inadequate Performance

- Incorrect testing procedures or calculations.
- Fan running too slowly.
- Fan wheel rotating in wrong direction.
- Wheel not properly centered relative to inlet.
- Poor system design, closed dampers, air leaks, clogged filters or coils.
- Obstructions or sharp elbows near inlets.
- Sharp deflection of airstream at fan outlet.

### Excessive Noise

- Fan operating near "stall" due to incorrect system design or installation.
- Vibration originating elsewhere in the system.
- System resonance or pulsation.
- Improper location or orientation of fan intake and discharge.
- Inadequate or faulty design of supporting structures.
- Nearby sound reflecting surfaces.
- Loose accessories or components.
- Loose drive belts.
- Worn bearings.

### Premature Component Failure

- Prolonged or major vibration.
- Inadequate or improper maintenance.
- Abrasive or corrosive elements in the airstream or surrounding environment.
- Misalignment or physical damage to rotating components or bearings.
- Bearing failure from incorrect or contaminated lubricant or grounding through the bearings while arc welding.
- Excessive fan speed.
- Extreme ambient or airstream temperatures.
- Improper belt tension.
- Improper tightening of wheel bushing bolts.

## REPLACEMENT PARTS

It is recommended that only factory-supplied replacement parts be used. **nyb** fan parts are built to be fully compatible with the original fan, using specific alloys and tolerances. These parts carry a standard **nyb** warranty.

When ordering replacement parts, specify the part name, **nyb** shop and control number, fan size, type, rotation (viewed from drive end), arrangement and mounting position and bearing size or bore. Most of this information is on the metal nameplate attached to the fan base.

Example: Part required: Wheel

Shop/control number: B-10106-100

Fan description: Size 2206A10 Pressure Blower

Rotation: Clockwise

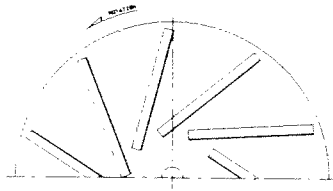
Arrangement: 4

Suggested spare parts include:

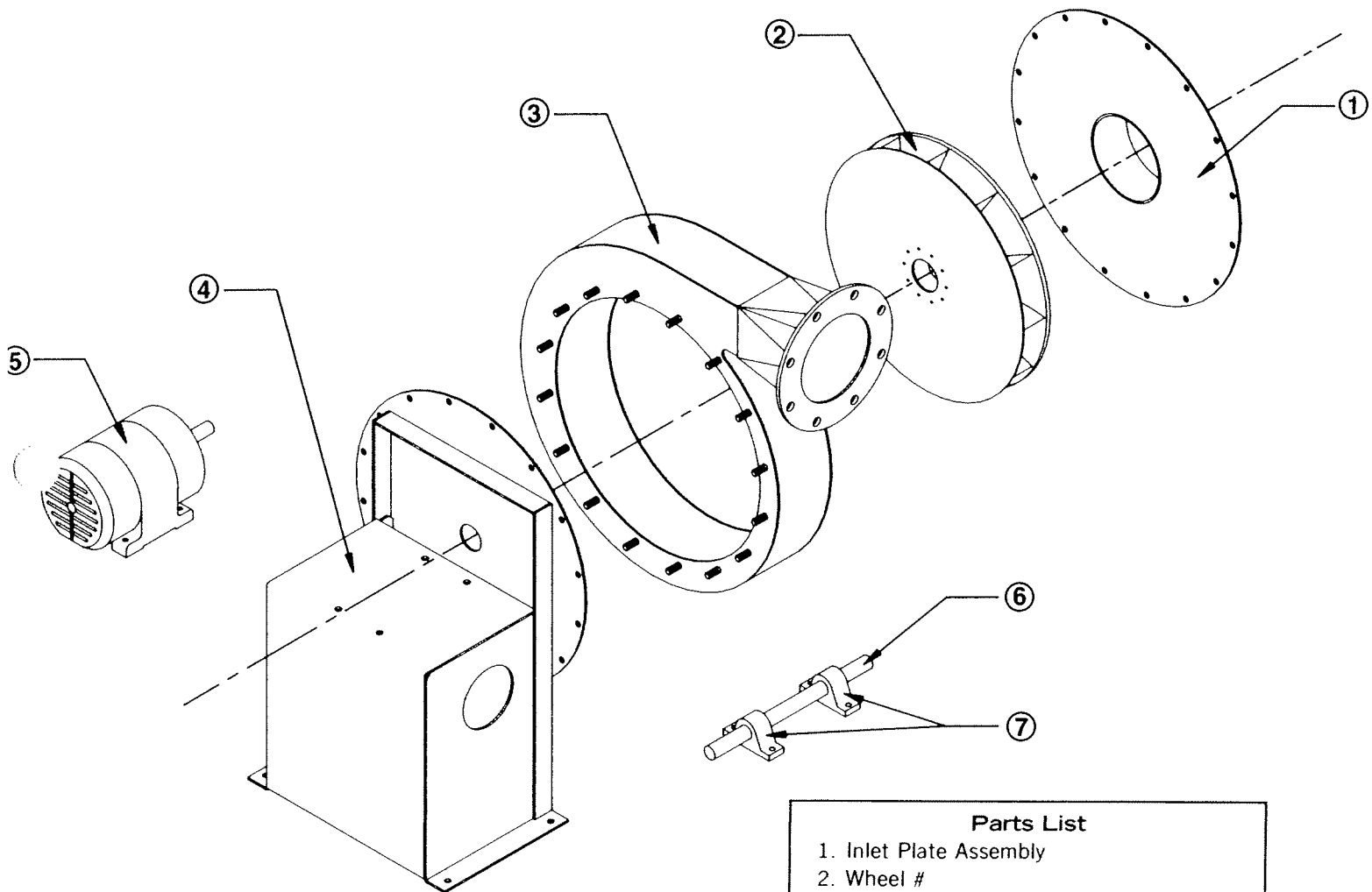
Wheel	Component parts: Damper
Shaft*	Motor
Bearings*	Coupling*
Shaft Seal*	Sheaves*
	V-Belts*

\* Arrangements 1/8 only.

SPECIFY ROTATION AS VIEWED FROM DRIVE SIDE



ARROW INDICATES COUNTERCLOCKWISE ROTATION



#### Parts List

1. Inlet Plate Assembly
2. Wheel #
3. Housing #
4. Pedestal Assembly
5. Motor
6. Shaft
7. Bearings

# Order for parts must specify rotation.

When ordering replacement parts supply **nyb** shop number from nameplate and complete description of parts required.





## Outen Engineering Company

245 The Promenade North • Long Beach, CA 90802

Phone: (310) 435-5552 FAX: (310) 435-9272

January 17, 1995

Mr. Roy Chesley  
Sierra Pacific General Contractors Corp.  
113 Linden Court  
Burbank, California 91502

Dear Mr. Chesley:

Subject: **Completion of Engineering for the Insurance Auto Auctions North  
Hollywood Site Development**

This letter confirms our telephone discussion yesterday concerning completion of the engineering design for the site development work at the Insurance Auto Auctions North Hollywood site. The original plan for the project was to proceed through the following steps:

1. Develop a site plan showing the new locations of auction lots, branch office, vehicle inspection lots, parking lots, drop zones, and vehicle storage lots.
2. Prepare preliminary grading plan and profile drawings to be used to estimate cut and fill quantities.
3. Assist with the preparation of a construction cost estimate to be used for approval of funding for the project.
4. Revise the site plan and grading drawings as necessary to incorporate any changes resulting from the budget approval process and develop drainage details necessary to finalize the site drainage design.
5. Provide on-site construction engineering consisting of field design of drainage details, field engineering support, and monitoring and inspection of the grading and paving contractor's work. We proposed a civil engineer, Mr. Ed Chandler, for the on-site engineering work.

As you are aware we completed Items 1, 2, and 3 during August 1994. We understand that funds have now been allocated for the project and that construction will begin soon. Items 4 and 5 have not been completed. We were recently asked to furnish the CAD files of our preliminary grading drawings and topographic map to a land surveyor, David Gray and Associates. We are complying with your request and sending the information to David Gray with a copy of this letter.

We are concerned that the preliminary design may be used for construction. As we previously pointed out, the grading plans were prepared to obtain cut and fill quantities for the estimate. Details of the design have not been completed yet. Please be advised that the following items need to be completed to finalize the design:

- The proposed site plan and grading plan should be review with CalMat to obtain their approval.
- Adequate drainage must be provided from the low spot on the access road to the Desmond lease and the CalMat self-storage area to the north of the IAA fence to prevent flooding of that area.
- Paving the auction lot will reduce the infiltration capacity of the property reducing the amount of water absorbed into the soil and increasing the runoff. The additional paving and re-grading the site will both change the surface-drainage characteristics of the site. Therefore, the drainage ditch along the south edge of the IAA lease should be checked.
- Anticipated changes in the storm water flow to the drainage box and storm water drainage system at the southwest corner of the CalMat property and to Laurel Canyon Boulevard should be determined and communicated to the proper agencies.
- Since the site was previously a landfill, the contractor needs to be advised of precautions necessary to avoid the landfill gas collection pipelines and not to expose buried trash.
- The ability to proceed without obtaining additional permits should be confirmed.

While it is not essential that the grading design be completed by Outten Engineering Company, we strongly recommend that Sierra Pacific and Insurance Auto Auctions utilize a professional engineer to complete the design and address these unfinished issues. Please contact me if we can be of further service.

Very truly yours,



Thomas W. Outten

cc: Mr. Tony Dominguez, IAA  
Mr. George Cosby, CalMat (with drawings)  
Mr. David Gray, (with CAD drawing files)  
Mr. Ed Chandler, OEC  
file



## **Outten Engineering Company**

245 The Promenade North • Long Beach, CA 90802

Phone: (310) 435-5552 FAX: (310) 435-9272

### **CONFERENCE NOTES NO 271-01**

#### **INSURANCE AUTO AUCTIONS SITE DEVELOPMENT PROJECT PRELIMINARY DESIGN REVIEW MEETING AUGUST 11, 1994**

#### **PARTICIPANTS:**

Tony Dominguez	Insurance Auto Auctions
Roy Chesley	Sierra Pacific
Tom Outten	Outten Engineering Company

#### **PURPOSE OF MEETING:**

The meeting was held to review preliminary plot plans and grading drawings which are to be the basis for an appropriation request cost estimate.

#### **ITEMS DISCUSSED:**

##### **1. Plot Plan Options**

Two plot plan options were previously developed showing different configurations for the auction lots, branch office, vehicle inspection lots, parking lots, and drop zones. Option "A" was selected as the basis for continuing work.

##### **2. Revisions to the Option A Plot Plan**

The following modifications to the Option A plot plan were requested:

- Move the branch office and guard house to the area along Laurel Canyon Blvd. north of the site entrance road.
- Move the tow out zone to the south so that it is next to the tow in zone.
- Increase the width of the tow in zone to sixty feet.

- Square off the southeast corner of the Twentieth Century vehicle inspection lot by realigning the road in that vicinity.
- Swap the parking lots and Twentieth Century vehicle inspection lots so that the parking lot is closer to the main entrance.
- Add a gate across the road to limit public access to areas west of the parking lot.

**Action:** Tom Outten

### **3. Fire Department Requirements**

Information obtained during several telephone discussions between Tom Outten and various Fire Department personnel was discussed. If the fire road and/or hydrant locations are modified, the fire department must be notified by submitting revised plans for plan check and approval. A permit is required for hydrant work. The current minimum requirement for hydrant spacing is every three hundred feet. Compliance with this requirement would result in the addition of eleven new hydrants and a new fire water header. A drawing showing possible hydrant locations and header routing was reviewed.

The current vehicle storage lot layout entails relocating a section of the existing fire road to the perimeter of the site and moving two hydrants next to the realigned road. Roy Chesley will contact the fire department to see if the fire road and two hydrants can be relocated without adding any additional hydrants.

**Action:** Roy Chesley

### **4. Vehicle Storage Lot Alternate**

An alternate configuration for the vehicle storage lot was requested. After the modifications to the Option A plot plan described above are incorporated, a second set of plot plans will be developed with the fire road in the current location and the rows of vehicles oriented in the east-west direction instead of the north-south direction shown in the current option.

**Action:** Tom Outten

(Note: This alternate plan was subsequently developed. The capacity of the storage lot was increased by approximately 100 vehicles from 2400 to 2500.)

### **5. Grading Plan**

A topographical map of the site was reviewed. The drawing shows the existing contours which indicate the high and low spots. It also shows the proposed contours after grading and paving the site. Work sheets showing profile drawings at several stations throughout

the newly acquired lease space were reviewed. These drawings show the proposed final top of paving elevations, four inch thick layer of A/C paving, six inch deep layer of road base material, and the proposed rough grading elevations for the bottom of the base material. The drawings were used to obtain preliminary rough quantities of cut and fill, imported base material, and asphalt paving. The cut, base, and asphalt quantities for roads in the vehicle storage lot were also determined. The grading and paving quantities calculated were transmitted to Sierra Pacific for use in preparing the cost estimate.


**Action:** Roy Chesley

A grading plan drawing was reviewed which shows the proposed final grade contours. The final grade follows the existing site contours except that high and low spots are eliminated to provide uniform drainage of the site. The existing drainage plan for the property is maintained with the east portion of the site sloping toward Laurel Canyon Blvd. and the west portion toward the drainage structure at the west edge of the property. Drainage swales will be provided along the east portion of the north fence line to direct the flow toward the east and along the south fence to direct the runoff to the west. The work can be accomplished in phases with additional drainage swales provided at the edge of the work area to facilitate drainage during the interim period.

Outten Engineering Company will produce quantities of cut and fill for additional grading in the vehicle storage lot and will prepare additional profile drawings. Due to the fast schedule, it is anticipated that Outten Engineering Company will not prepare a complete design package of final grading drawings, but will instead provide a civil engineer, Ed Chandler, at the site during construction to work with the contractor's grading crew to establish elevations and provide drainage details.

**Action:** Tom Outten

Prepared by:

A handwritten signature in cursive script, reading "Thomas W. Outten". The signature is written in dark ink and is positioned above a horizontal line.

Thomas W. Outten

cc: Ed Chandler



## **Outten Engineering Company**

245 The Promenade North • Long Beach, CA 90802

Phone: (310) 435-5552 FAX: (310) 435-9272

### **CONFERENCE NOTES NO 271-02**

#### **INSURANCE AUTO AUCTIONS SITE DEVELOPMENT PROJECT GRADING AND PAVING DESIGN REVIEW MEETING SEPTEMBER 5, 1994**

#### **PARTICIPANTS:**

Tony Dominguez

Insurance Auto Auctions

Tom Outten

Outten Engineering Company

#### **PURPOSE OF MEETING:**

The meeting was held to review the grading and paving drawings which were produced for the North Hollywood site.

#### **ITEMS DISCUSSED:**

##### **1. Plot Plan**

It was confirmed that the plot plan as shown on drawings 271-C-006, Rev 1 and 271-C-007, Rev 1 represents the desired configurations for the auction lots, branch office, vehicle inspection lots, parking lots, and drop zones. The vehicle storage lot in this plan has a capacity of approximately 2400 vehicles. There may be some minor realignment of fences and areas in the future, but the roads and extent of paving should remain as shown.

##### **2. Grading Plan**

The Grading Plan, drawing 271-C-004, Rev 0, was reviewed. The drawing shows final grade contours at the west end of the site to provide a more even slope of the vehicle storage lot. It also shows the grading work required at the east end of the site to eliminate low points and provide better drainage of the future auction, inspection, and parking lots. The grading plan is based on the current topography of the site in which the east portion of the site drains south and east toward Laurel Canyon Blvd. and the center and west areas drain south and west to a drainage ditch along the south fence line which flows to a drainage structure at the west property line.

The possibility of providing more fill to raise the east portion of the site was discussed. This would result in draining the entire area of auction lots to the west drainage structure. This alternative will not be pursued at this time, however, it may be considered again later.

In either case, adequate drainage from the apparent low spot along the access road and CalMat self storage area to the north of the IAA fence needs to be provided with a swale or culvert to permit runoff to Laurel Canyon Blvd. on the east or to the drainage ditch to the south.

### 3. Profile Drawings

Three drawings (271-P-001 through -003, Rev 0) showing east-west profile views cut at grid locations N6100, N6000, N5900, N5800, N5700, N5600, and N5500 were reviewed. The drawings indicate the existing grade, the proposed rough grade, proposed finish grade, and the limits of the grading and paving work. The profiles are based on grading the area in the vicinity of the auction lots from about E4000 to E4900 and paving the area from grid location E4280 to approximately E4900 at the property line fence at Laurel Canyon Blvd.

The profile drawings show existing features such as fences, roads, buildings, and parking lots. The cut and fill areas are also called out.

### 4. Cut and Fill Quantities

The profile drawings were utilized to develop a quantity take off for cut and fill. The attached tables were used in the calculations. The results are summarized herein:

West Area Cut	465 cy
West Area Fill	3017 cy
Net West Area Fill	2551 cy
East Area Cut	7545 cy
East Area Fill	6770 cy
Net East Area Fill	776 cy
Net Imported Fill (East & West)	1775 cy
Imported Base Material	5910 cy
Asphalt Paving	3940 cy

The quantities of imported base material and asphalt paving are based on four inches of asphalt over six inches of base. The figures include the paving in the east area around the auction lots as described in Item No. 3 above. It does not include grading (cut), base material, or asphalt paving for new roads in the vehicle storage lot.

**5. Schedule**

The drawings and cost estimates developed to date will be used for a budget approval request for funds for the project. The review and approval process may take several weeks. Construction work could start shortly after approval, or the design may need to be modified if the full budget is not approved. We are in a wait-and-see mode until the budget is approved.

Prepared by:

A handwritten signature in black ink, reading "Thomas W. Outten". The signature is written in a cursive style with a horizontal line underneath the name.

Thomas W. Outten

cc: Ed Chandler  
Roy Chesley

West Property

27101	INSURANCE AUTO AUCTIONS N. HOLLYWOOD SITE GRADING							
	WEST END OF PROPERTY							
Item	North Profile Cut Area	South Profile Cut Area	Distance	Total Cut cu yd	North Profile Fill Area	South Profile Fill Area	Total Fill cu yd	Net Cut/(Fill)
6200-6100	0	47	100	87	0	95	176	(89)
6100-6000	47	28	100	139	95	165	482	(343)
6000-5900	28	0	100	52	165	499	1229	(1,177)
5900-5800	0	51	100	94	499	56	1027	(933)
5800-5700	51	0	100	94	56	0	103	(9)
				0			0	0
				0			0	0
				0			0	0
				0			0	0
Total				465			3017	(2,551)

East Property

27101	INSURANCE AUTO AUCTIONS N. HOLLYWOOD SITE GRADING							
	EAST END OF PROPERTY							
Item	North Profile Cut Area	South Profile Cut Area	Distance	Total Cut cu yd	North Profile Fill Area	South Profile Fill Area	Total Fill cu yd	Net Cut/(Fill)
6200-6100	0	0	100	0	0	0	0	0
6100-6000	0	414	100	767	0	500	926	(159)
6000-5900	414	504	100	1701	500	440	1741	(40)
5900-5800	504	115	100	1147	440	455	1657	(511)
5800-5700	115	356	100	871	455	260	1324	(453)
5700-5600	356	648	100	1860	260	172	802	1,058
5600-5500	648	0	100	1200	172	0	319	881
							0	0
							0	0
Total				7545			6770	776

Asphalt and Crushed Rock

27101	INSURANCE AUTO AUCTIONS N. HOLLYWOOD PAVING					
	EAST END OF PROPERTY					
Item	North Profile Fill Area	South Profile Fill Area	Distance	Total Quantity cu yd	Total Asphalt cu yd	Total Base cu yd
6200-6100	0	0	100	0	0	0
6100-6000	0	546	100	1011	404	607
6000-5900	546	551	100	2031	813	1219
5900-5800	551	506	100	1957	783	1174
5800-5700	506	534	100	1925	770	1155
5700-5600	534	523	100	1958	783	1175
5600-5500	523	0	100	969	388	582
				0		
				0		
Total				9850	3940	5910



## SCS FIELD SERVICES

February 21, 1995  
File No. 0789003.01

SENT VIA FAX 2/22/95

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065  
FAX (213) 258-1583

Subject: Landfill Gas (LFG) Condensate Destruction at the Hewitt Pit Sanitary  
Landfill, North Hollywood, California

Dear Mr. Cosby:

As a follow-up to our recent site visit and follow-up meeting, SCS Field Services (SCS-FS) is pleased to submit the following Scope of Work, Assumptions and Conditions, and Compensation for the subject project.

### SCOPE OF WORK

- Task 1 Provide regulatory assistance in obtaining South Coast Air Quality Management District (SCAMQD) Permit approval for installation of an LFG Condensate Destruction Unit manufactured by Sur-Lite Corporation (see attached proposal from Sur-Lite and concept drawings prepared by SCS Engineers [SCS-LB]).
- Task 2 Install and start-up the LFG Condensate Destruction Unit.
- Task 3 Investigation of possible modifications of the existing LFG condensate collection system. Under this task SCS-FS/LB will perform the following work:
- Collect information pertaining to the existing LFG collection system and condensate traps,
  - Collect existing site topo map and any planned site regrading plans,
  - Review existing LFG collection system to revise alignment and/or slope of pipes to minimize number of condensate traps,
  - Revise the design of condensate traps to be compatible with pneumatic pumping system,
  - Conceptual layout of a central pneumatic system to convey condensate from individual condensate traps to a central storage tank located near the existing Blower/Flare Station,



Mr. George Cosby  
February 21, 1995  
Page Two

- Prepare a conceptual layout of the recommended condensate collection system,
- Prepare construction cost estimate for the recommended modifications including central pneumatic conveyance system for condensate.

The deliverable of this task will be a letter type report of the findings and recommendations. The work can be completed within three weeks of notice to proceed.

### **ASSUMPTIONS AND CONDITIONS**

The Scope of Work and Compensation contained in this proposal are based on the following Assumptions and Conditions:

1. Unrestricted site access for personnel, equipment, and materials to enable completion of work. Cal Mat will be responsible for ensuring that all vehicles are removed from the work areas.
2. Cal Mat will supply the Sur-Lite manufactured liquid injector/destruction unit. (See attached proposal from Sur-Lite and concept drawings prepared by SCS-LB).
3. Cal Mat will contract directly for all electrical work.
4. Cal Mat will pay for all permit fees, however, SCS-FS will assist Cal Mat in obtaining the permits.
5. This proposal does not include cost for resource testing the flare.
6. The work will be performed in accordance with the GRCD/ SWANA Landfill Gas Division Health and Safety Task Force, "A Compilation of Landfill Gas Laboratory and Field Practices and Procedures," dated March 1992. Any additional health and safety requirements may cause an increase in our price.
7. The installed LFG condensate destruction unit will be designed to process condensate generated from the entire LFG collection system. Modification to the LFG collection system may be required to increase Btu content within collected LFG to process all generated condensate.
8. Work to be completed under the terms and conditions of our existing Agreement.

Mr. George Cosby  
February 21, 1995  
Page Three

9. It is assumed that Cal Mat will provide plans of existing LFG collection system at no cost to SCS-FS.

#### COMPENSATION

Tasks 1 and 2, as described in the the Scope of Work, will be performed on a time and materials basis not to exceed \$26,000.

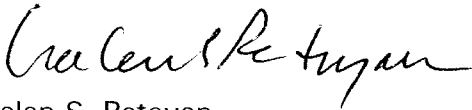
Task 3, as described in the Scope of Work, will be performed on a lump sum basis for the amount of \$2,700.

Should you have any questions, do not hesitate to contact either of the undersigned.

Very truly yours,



James D. Bier  
Project Manager



Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

JDB:vlf  
JDB\0789003D

cc: Kris Saigal, SCS Engineers



(310) 693-0796  
(800) 432-8818  
FAX: (310) 693-7564

8124 Allport Avenue • Santa Fe Springs, California 90670

## **SUR-LITE'S HIGH BTU WASTE GAS FLARING SYSTEM**

*The Sur-Lite Flaring System is the result of 25 years of waste gas combustion experience. Sur-Lite has developed flaring systems for customers across the North American continent. The Sur-Lite Flaring System is designed to perform at a very high Destruction and Removal Efficiency (DRE) while controlling oxides of nitrogen (Nox) and carbon monoxides (CO). The Sur-Lite Flaring Systems is low cost, user friendly, and maintenance simple.*

### *Advantages of Sur-Lite Flaring System:*

- *Designed with optional or integral fuel filter*
- *Patented Sur-Lite Pilot Ignition System (Will Light Every Time)*
- *Controls in NEMA 4 Enclosure (Suitable for Outdoor Installation)*
- *Temporary/Rental Flares Available*
- *Guaranteed Low Carbon Monoxide Emissions 0.20 LBS Per mm BTU)*
- *Guaranteed Conformity to Local Air Quality Management District Requirements for Both Approval to Construct & Approval to Operate*
- *Designed with optional or integral Condensate Injection System*
- *Sur-Lite Flame Bath Burners (High DRE, Low NOX, Low CO)*
- *Guaranteed any Turn-Down (Minimum Flow) and Meet AQMD Requirements*
- *Guaranteed Low NOX Emissions (0.06 NOX Per MM BTU)*
- *Guaranteed 95% Destruction & Removal Efficiency*

*Sur-Lite offers the following installations as an index of our most recent experience:*

<i>City of Tacoma, WA</i>	<i>500 SCFM Flare</i>	<i>1986</i>	<i>Madison</i>
<i>US EPA, Uniontown, OH</i>	<i>200 SCFM Flare</i>	<i>1986</i>	<i>Oceanside</i>
<i>McFarland Energy, CA</i>	<i>420 SCFM Flare</i>	<i>1986</i>	<i>Sacramento</i>
<i>City of Mountain View, CA</i>	<i>400 SCFM Flare</i>	<i>1987</i>	<i>Madison</i>
<i>Orange County Sanitation District, CA</i>	<i>750 SCFM Flare</i>	<i>1987</i>	<i>Madison</i>
<i>City of Sunnyvale, CA</i>	<i>1200 SCFM Flare</i>	<i>1987</i>	<i>Sunnyvale</i>
<i>City of Mountain View, CA</i>	<i>1000 SCFM Flare</i>	<i>1987</i>	<i>Hawks Prairie</i>
<i>County of San Bernadino, CA</i>	<i>2000 SCFM Flare</i>	<i>1987</i>	<i>Milliken</i>
<i>Santa Fe Energy, CA</i>	<i>400 SCFM Flare</i>	<i>1987</i>	<i>Sunnyvale</i>
<i>Hawks Prairie, CA</i>	<i>1350 SCFM Flare</i>	<i>1987</i>	<i>Hawks Prairie</i>
<i>Golden Eagle, CA</i>	<i>250 SCFM Flare</i>	<i>1988</i>	<i>Oceanside</i>
<i>US Air Force, Luke Air Force Base</i>	<i>Vapor Transfer</i>	<i>1988</i>	<i>Special</i>

<i>County of Contra Costa, CA</i>	<i>1600 SCFM Flare</i>	<i>1988</i>	<i>Sacramento II</i>
<i>City of Oceanside, CA</i>	<i>200 SCFM Flare</i>	<i>1988</i>	<i>Oceanside</i>
<i>City of Alameda, CA</i>	<i>450 SCFM Flare</i>	<i>1988</i>	<i>Madison</i>
<i>Dane County Landfill, PA</i>	<i>750 SCFM Flare</i>	<i>1989</i>	<i>Madison</i>
<i>Palo Alto, CA</i>	<i>1000 SCFM Flare</i>	<i>1989</i>	<i>Hawks Prairie</i>
<i>Paradise Valley, CA</i>	<i>350 SCFM Flare</i>	<i>1989</i>	<i>Chollas</i>
<i>City of Riverside, CA</i>	<i>666 SCFM Flare</i>	<i>1990</i>	<i>Madison</i>
<i>City of San Clemente, CA</i>	<i>350 SCFM Flare</i>	<i>1990</i>	<i>Chollas</i>
<i>Mammoth County, NJ</i>	<i>1200 SCFM Flare</i>	<i>1990</i>	<i>Sunny Vale</i>
<i>Arizona Street Landfill, CA</i>	<i>350 SCFM Flare</i>	<i>1990</i>	<i>Chollas</i>
<i>City of Whittier, CA</i>	<i>2000 SCFM Flare</i>	<i>1990</i>	<i>Milliken</i>
<i>Orange County Sanitation District, CA</i>	<i>750 SCFM Flare</i>	<i>1990</i>	<i>Madison</i>
<i>City of Upland, CA</i>	<i>600 SCFM Flare</i>	<i>1991</i>	<i>Madison</i>
<i>City of Huntington Beach, CA</i>	<i>100 SCFM Flare</i>	<i>1991</i>	<i>Nina</i>
<i>Town of North Hemstead, NY</i>	<i>2400 SCFM Flare</i>	<i>1991</i>	<i>Milliken</i>
<i>City of Montebello, CA</i>	<i>400 SCFM Flare</i>	<i>1992</i>	<i>Chollas</i>
<i>County of Ventura, CA</i>	<i>2400 SCFM Flare</i>	<i>1992</i>	<i>Milliken</i>
<i>Petroleum Recycling, CA</i>	<i>Vapor Transfer</i>	<i>1992</i>	<i>Nina</i>
<i>Angus Petroleum, CA</i>	<i>200 SCFM Flare</i>	<i>1993</i>	<i>Oceanside</i>
<i>Santa Margarita, CA</i>	<i>755 SCFM Flare</i>	<i>1993</i>	<i>Madison</i>
<i>Dessor, CA</i>	<i>600 SCFM Flare</i>	<i>1993</i>	<i>Madison</i>

*It is general practice to design a flare with a refractory lined (4½" lite weight castable) bottom and stack sides. Sur-Lite offers ceramic stack sides on some special installations. The temperature control loop includes either manual or automatic (motor operated) dampers, temperature sensors, temperature controller, site ports, pilot with flame safeguard, flame arrestor and motor operated shutoff valve. Generally, Sur-Lite designs for 0.5 of a second or greater retention time. The combustion air damper system controls the stack temperature at 1400° F or greater. If the stack temperature is less than 1400° F, the control system will cause the dampers to drive closed, reducing the excess air and causing the stack temperature to rise. If the stack temperature is more than 1400° F, the control system will cause the dampers to drive open, causing the fame temperature to fall. Although standards vary nationally, Sur-Lite recommends four (4) 4" capped nipples across one side of the flare stack to serve as test ports: generally the ports should be 4' to 6' from the top of the stack.*

*For twenty years Sur-Lite has manufactured High Efficiency Low Nox (natural draft) thermal oxidizers. Sur-Lite has manufactured unites of both the rectangular and circular design. Since the early seventies, the South Coast Air Quality Managements District (SCAQMD) has gradually increased its requirements for "Best Available Control Technology". As the demand for lower emissions increased, Sur-Lite found that the circular flares were marginal in meeting standards. By the early eighties Sur-Lite's collected data indicated that the Sur-Lite burner worked more effectively in rectangularly designed flares. Sur-Lite's experience indicates that the rectangular flare in combination with Sur-Lite Flame Bath Burners is a necessary combination of components required to meet Air Quality Standards. The Sur-Lite Flame Bath Burner is a uniquely designed self-aspirating raw gas burner. As applied to Landfill, Digester and Vent gases, the success is unparalleled. A second issue involved in High Destruction Efficiency and Low Nox and Low CO generation is a good bottom section mixing of combustion air and waste gases. The rectangular design allows for placement of dampers in a position consistent with the burner and manifold arrangement. This enables a ready supply of excess oxygen per cubic of waste gas burned, generating controlled bottom section temperatures and effective mixing throughout the flare. In the traditional context High Destruction Efficiency is attributed to three factors--time, temperature, and turbulence. In fact, turbulence is defined a high degree of excess combustion air and waste gas mixing. The Sur-Lite Flame Bath Burner and appropriately placed dampers are essential ingredients of effecting High Destruction Efficiency while maintaining Low Nox and Low CO emissions.*

Sur-Lite's experience indicates that a successfully designed ground flare relies on the air being combined with the gases effectively across the bottom section of the combustor. Rectangular design provides significant temperature gradient across the bottom section of the flare generating significant off the wall turbulence. As you will see in the next pages, Sur-Lite manufactures a range of enclosed flares incorporating the rectangular design from 2.25 MM BTU's to units in excess of 100 MM BTU's. All have been tested in the South Coast Air Quality Management District and in other Districts across the U.S. and have successfully met Air Quality standards.

The are nine Sur-Lite standard enclosed flaring systems:  
(Other models are available upon request)

#### **SUR-LITE MODEL "NINA"**

Foot Print 40" x 40"  
w/ Fuel Filter 76" x 40"  
Stack Height 16'  
Waste Gas Pressure 12" WC or greater  
Weight 7,000lbs Castable/4,000lbs Ceramic  
Max. Heat Release 2.25 MM BTU/HR\*  
Min. Heat Release 0.5 MM BTU/HR  
Drawing No. 8500-033

#### **SUR-LITE MODEL "CHOLLAS"**

Foot Print 55" x 61"  
w/ Fuel Filter 92" x 61"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 14,500lbs Castable/9,500lbs Ceramic  
Max. Heat Release 10.5 MM BTU/HR\*  
Min. Heat Release 2.1 MM BTU/HR  
Drawing No. 8500-071

#### **SUR-LITE MODEL "HAWKS PRAIRIE"**

Foot Print 108" x 102"  
w/ Fuel Filter 148" x 102"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 25,000lbs Castable/16,000lbs Ceramic  
Max. Heat Release 30 MM BTU/HR\*  
Min. Heat Release .6 MM BTU/HR  
Drawing No. 8500-029

#### **SUR-LITE MODEL "SACRAMENTO"**

Foot Print 120" x 108"  
w/ Fuel Filter 180" x 108"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 38,500lbs Castable/26,000lbs Ceramic  
Max. Heat Release 45.5 MM BTU/HR\*  
Min. Heat Release 9.0 MM BTU/HR

#### **SUR-LITE MODEL "PRIMA"**

Foot Print 139" x 139"  
w/ Fuel Filter 179" x 139"  
Stack Height 40', 60', 80', 100'  
Waste Gas Pressure 16" WC  
Weight 49,700lbs  
Max. Heat Release 112.5 BTU/HR\*  
Min. Heat Release 18.9 MM BTU/HR  
Drawing NO. 8500-0080

#### **SUR-LITE MODEL "OCEANSIDE"**

Foot Print 49" x 49"  
w/ Fuel Filter 89" x 49"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 13,700lbs Castable/8,000lbs Ceramic  
Max. Heat Release 7.5 MM BTU/HR\*  
MIN. Heat Release 1.5 MM BTU/HR  
Drawing No. 8500-0065

#### **SUR-LITE MODEL "MADISON"**

Foot Print 83" x 83"  
w/ Fuel Filter 123" x 83"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 22,500lbs Castable/14,500lbs Ceramic  
Max. Heat Release 22.5 MM BTU/HR\*  
MIN. Heat Release 4.5 MM BTU/HR  
Drawing No. 8500-0067

#### **SUR-LITE MODEL "SUNNYVALE"**

Foot Print 112" x 106"  
w/ Fuel Filter 152" x 106"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 36,500lbs Castable/24,000lbs Ceramic  
Max. Heat Release 36 MM BTU/HR\*  
Min. Heat Release 7.2 MM BTU/HR  
Drawing No. 8500A-022

#### **SUR-LITE MODEL "MILLIKEN"**

Foot Print 137" x 108"  
w/ Fuel Filter 177" x 108"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 40,000lbs Castable/29,000lbs Ceramic  
Max. Heat Release 60 MM BTU/HR\*  
Min. Heat Release 12 MM BTU/HR  
Drawing No. 8500A-017

\*\*\* Heat release equals:

- Flow rate in standard cubic feet
- Times the waste gas methane fraction
- Times 1000 British Thermal Units per cubic foot
- Times 60 minutes per hour

or

$$\text{Heat Release (BTU/HR)} = \text{Flow (SCFM)} \times \text{Methane fraction} \times 1000 \text{ BTU/FT}^3 \times 60 \text{ minutes/hr}$$

Following is a partial list of options:

- |                               |                        |
|-------------------------------|------------------------|
| • Auxiliary Fuel Manifold     | • Strip Chart Recorder |
| • Ladder and/or Platform      | • Seismic Calculations |
| • Blowers                     | • Flow Measurement     |
| • NEMA 7 Enclosures           | • Fuel Filters         |
| • Uninterrupted Power Supply  | • Turndown 20 to 1     |
| • Condensate Injection System |                        |

Sur-Lite Corporation has been building Condensate Injection Systems since 1962. The systems were designed to destroy, oily water and liquids from chemical processes. Generally, Sur-Lite's Condensate Injection System, which can be mounted on all Sur-Lite Flares will include.

- Sur-Lite Liquid Waste Nozzle designed to inject a quantity of condensate into the existing flare.
- A small combustion air fan.
- A landfill gas fuel train.
- An atomizing air train.
- A condensate injection pump.
- An air compressor.
- A NEMA 4 control panel.
- Skid with a footprint of approximately 8' x 10' and a weight of 10,000 lbs

The system runs on 440 V, 3 phase power and will require connection to your landfill gas system and your condensate collection system. Generally, the nozzle will require the use of waste gas to assure maximum destruction of all organics entrained in the liquid stream. The Sur-Lite injection nozzle can handle particulate sizes up to 1/8" in diameter.

For specific information on the Sur-Lite Condensate Injection Nozzle, please ask for Sur-Lite brochure LW-91-6000-01.

Variation in Methane, Carbon Dioxide, and other constituents affect emissions, significantly. Assuming 50% Methane - 40% Carbon Dioxide, Sur-Lite will guarantee emissions as low as:

.06 pounds per million BTU Nox  
.20 pounds per million BTU CO  
(During the warranty period.)

Although a higher number is obtainable, we generally designed for and achieve 99% Destruction and Removal Efficiency.

Sur-Lite Corporation has designed the Sur-Lite Flaring System for all weather outdoor use. Skin temperatures and safety venting features are designed in compliance with Occupation Safety and Health Administration Standards.

Typically the Sur-Lite design is ideal for the following applications:

- \* Vapor Transfer Systems \*
- \* Digester Gas Destruction \*
- \* Landfill Gas Control Systems \*
- \* Soil Vapor Recovery Systems \*
- \* Stripping Column Vent Gas Destruction \*
- \* Tank Cleaning Vent Gas Destruction \*
- \* Temporary Oxidizer Service \*

**INFORMATION NEEDED FOR THE SUR-LITE CONDENSATE INJECTION SYSTEMS:**

Standard Sur-Lite Condensate Injection System are supplied to handle volumes from 20 GPH to 300 GPH. Custom-designed burners can be supplied to fit applications other than standard.

Flow rate of material of GALLONS PER HOUR \_\_\_\_\_

Analysis of the material being delivered to the burner:

Gravity, A.P.I. @ 60°F. \_\_\_\_\_

Specific Gravity @ 60°F. \_\_\_\_\_

Flash Point TCC, °F. \_\_\_\_\_

Pour Point, °F. \_\_\_\_\_

Sulfur, % \_\_\_\_\_

% of water in the emulsion delivered to the nozzle \_\_\_\_\_

BTU/gallon of the material to be burned \_\_\_\_\_

Percent of ash \_\_\_\_\_

Metals present in the material:

(1) Vanadium, % \_\_\_\_\_

(2) Nickel, % \_\_\_\_\_

(3) Copper, % \_\_\_\_\_

(4) Sodium, % \_\_\_\_\_

Size of the combustion chamber into which the burner will be firing: \_\_\_\_\_

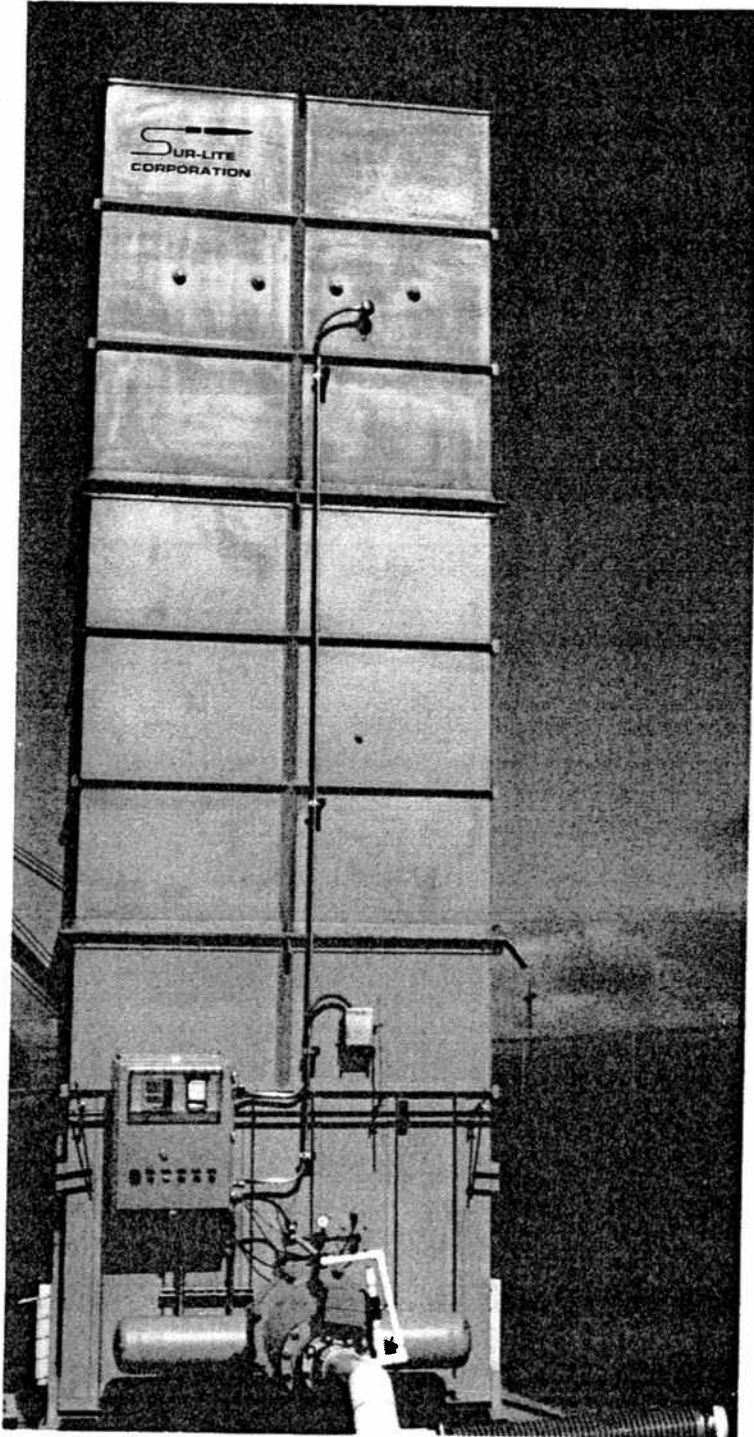
Steam pressure available for atomizing purposes (it is desirable to have steam at 150 psig) \_\_\_\_\_

Air pressure available for atomizing purposes- if it is to be used instead of steam (it is desirable to have air at 100 psig) \_\_\_\_\_

For drawings and further information, please contact:

Sur-Lite Corporation  
8124 Allport Avenue  
Santa Fe Springs, California 90670  
Phone No. (310) 693-0796  
(800) 432-8818  
Fax No. (310) 693-7564

# **SUR-LITE GROUND FLARE**



*Sur-Lite Ground Flare in a landfill gas destruction application.*

- Controls gas migration and surface emissions from landfills
- Also used for effective destruction of digester and refinery gas
- Enclosed Flame Design
- Automatic Operation
- High Destruction Removal Efficiency (DRE)
- Meets EPA, state and local regulatory standards, including California

# **SUR-LITE GROUND FLARE**

Twenty-five years of proven experience in waste gas and fume incineration has enabled Sur-Lite to become a leading manufacturer of ground flares for landfill, digester, and refinery gas.

The turbulence generated in SUR-LITE'S FLAME BATH® BURNER assures effective destruction of low BTU gas.

The modular design of the FLAME BATH® BURNER permits flexibility in meeting specific project requirements.

Standard ground flare sizes are available from 30 to 4000 SCFM of waste gas (approximately 4 to 140 million BTU/HR). Smaller and larger sizes as well as multiple units can be supplied.

SUR-LITE ground flares are fully modulating with 5:1 turndown ratio.

Centralized control cabinet includes electronic temperature control system and provides automatic shutdown and restart functions.

SUR-LITE products have a reputation for reliability and long life. Our engineers, trained service technicians, and parts department are equipped for immediate response.

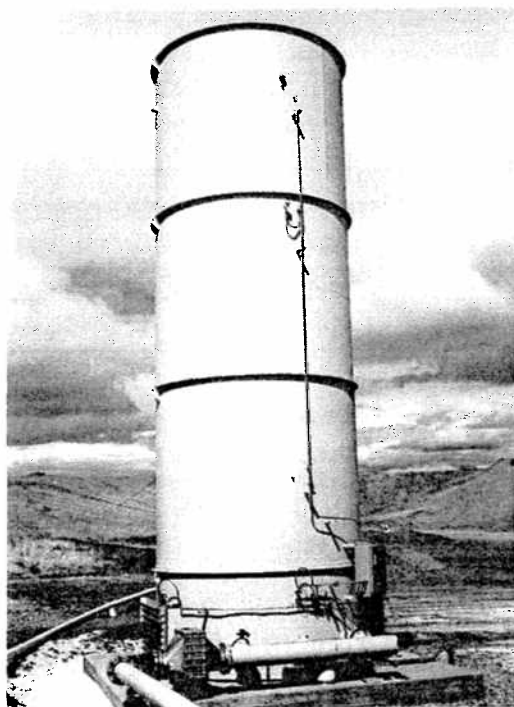
SUR-LITE'S experienced staff can assist with the regulatory permitting procedure.

SUR-LITE also manufactures combustion systems for application to heaters, boilers, and other process equipment.



**SUR-LITE CORPORATION**

8124 ALLPORT AVENUE  
SANTA FE SPRINGS, CALIFORNIA 90670  
(213) 693-0796 \* (213) 698-9432  
FAX (213) 693-7564





(213) 693-0796  
(800) 432-8818  
FAX: (213) 693-7564

## **SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

# **SUR-LITE THERMAL OXIDATION SYSTEMS**

## **(A GENERAL DESCRIPTION)**

For a set of constant conditions, a Sur-Lite Thermal Oxidizer is designed with a minimum combustion temperature of 1400°F and a minimum residence time of 0.3 seconds. Controls and sensors will be included to modulate the flow of air and/or fuel gas into the thermal oxidizer to automatically maintain the temperature within the combustion chamber at 1400°F. The oxidizer will be designed to operate and shut down automatically without an operator in attendance. Start-up will be automatic after initiation by an operator. A discussion of the Sur-Lite standard control system is provided in the enclosed specification SCS 100-2 (1/90).

## **SCOPE OF EQUIPMENT SUPPLY**

*The thermal oxidation system can include:*

- 1) Horizontal cylindrical incinerator casing, complete with access door, sight ports, and internal low specific heat lightweight insulating castable refractory, or equal, all structurally supported on a steel skid base.*
- 2) Combustion chamber inlet plenum.*
- 3) Combustion and dilution air forced (or induced) draft fan with pressure head at inlet sufficient for the thermal oxidizer system pressure drop, connected to a 3-phase, 60Hz, TEFC motor. Modulated damper to control combustion air volume.*
- 4) Sur-Lite Flame Bath gas burner with a gas-electric ignitor pilot. The Sur-Lite Flame Bath burner's unique design*

*allows for intimated mixing of fuel and combustion air, which results in complete combustion and maximum heat release.*

- 5) Starter panel for combustion air fan containing the control transformer for converting 3-phase power into single phase control power. This panel is shipped loose for installation where most convenient for the customer.*
- 6) Main control panel housing the instruments, including the temperature indicating controller, high temperature limit, ultraviolet combustion safeguard system, purge timer, alarm silencing switch , operating lights to show normal operation, starter pushbutton, gas pilot ignition pushbutton system, ignition transformer, fan draft switch, terminal strips, control circuit fuse, and nameplates.*
- 7) Natural gas piping train, including safety shutoff valves, automatic gas flow control valve, high and low gas pressure switches, pressure taps. All interconnecting piping mounted on the unit will be supplied, and all control items will be fully wired.*
- 8) Fuel oil piping train, including a manual isolating valve, strainer, pressure gauge, low pressure switch, automatic flow control valve, heavy oil requiring pre-heating, the safety shutoff valve is a three-way valve permitting the heated oil to be recirculated prior to ignition so as to assure successful lighting.*
- 9) Liquid waste piping train, including a manual isolating valve, manual flow control valve, and check valve. Atomizing medium piping train included a manual isolating valve, filter, pressure gauge, low pressure switch, ratio control regulator, needle valve, check valve, and a blowdown line for the*

*atomizer liquid passages. A trap is included when the atomizing medium is steam.*

- 10) Fume piping train, including a safety shutoff valve, flame arrestor, pressure gauges, low pressure switch, and high pressure switch.*
- 12) A shell and tube heat exchanger capable of increasing the temperature of fume stream and saving fuel. This also includes any additional ductwork that may be required.*
- 13) A highly effective recuperative heat exchange capable of increasing the temperature of the fume stream to reduce flue gas.*
- 14) A discharge stack 10' from equipment grade.*
- 15) A thermal oil heater.*
- 16) A high temperature bypass damper arrangement to provide adequate temperature adjustment when required.*
- 17) A static pressure controller damper at the fan inlet to provide constant pressure at varying flows.*
- 18) A scrubber that will contain the pumps, piping and controls for its operation, and will need a day tank for its caustic supply.*
- 19) The waste heat boiler and economizer could be provided with trim. The deaerated feed water, blowdown, and steam need to be piped to the unit. the feed water pump, necessary*

*valves, feed water deaerator, makeup water, and water treatment of the feed water need to be provided by others.*

- 20) Sur-Lite's combustion process will assure the inorganic solids after oxidation are in a fine powder form suspended in the flow stream. The flow stream velocity through the thermal oxidizer and the waste heat removal. The collected solids will need to be conveyed from the baghouse for disposal.*

## INSTALLATION

*The Sur-Lite equipment usually needs at least the following items to be supplied by others:*

- 1) Caustic supply daytank for the scrubber with caustic pump(s).*
- 2) Deaerator, condenser, condensate tank, and feed water pump for the waste heat boiler.*
- 3) Solids discharge conveyor from the baghouse.*
- 4) Water treating equipment for feed water.*
- 5) Concrete foundations, pads, and steel support structure.*
- 6) Connection of all utilities to the thermal oxidizer system terminal points, including 460 volt, 3-phase, 60 Hz power connection and fused and unfused disconnects, deaerated feed water of at least 200°F, blowdown and steam connection to the waste heat boiler, regulated pressure natural gas at 5 PSIG fuel oil, 100 PSIG atomizing air or steam to the fuel oil and liquid waste feed guns, and regulated 100 PSIG instrument air of a 5 CFM capacity.*

- 7) *Ducting required to and from the Sur-Lite supplied equipment.*
- 8) *Any permits, air pollution control approvals, and any other regulatory documents which may be required.*
- 9) *Remote control panel and interconnecting wiring between the local and remote control panels.*
- 10) *Installation of the thermal oxidizer.*
- 11) *Protective cover or shed for at least the burner and controls, if not the entire thermal oxidizer, if located outdoors (especially if the scrubber is used).*
- 12) *Installation engineering and supervision.*
- 13) *Start-up.*
- 14) *Air pollution compliance testing.*

NOTE: *Purchaser is to supply ductwork and utilities to within 10 radial feet of the Sur-Lite supplied equipment termination point, without any interference or obstruction to Sur-Lite equipment(tie-in presumed to be at equipment grade).*

*Purchaser is still responsible for electrical interlock between the Sur-Lite control panel and his equipment. Sur-Lite will supply relays in their electrical panel. Purchaser will also be responsible for obtaining soil test report, collection system, freight, air pollution compliance testing, and storage of equipment.*

## MAINTENANCE MANUALS

*Sur-Lite's standard maintenance and operation manual consists of the following:*

- 1) Parts list: Detailed breakdown of all recommended spare parts with identifying numbers and proper ordering instructions.*
- 2) Drawings, Schematics, and Specifications: Drawings, schematics, and specifications shall cover complete mechanical and electrical components, including electrical and/or pneumatic system.*
- 3) Service Instructions: Description of the frequency, methods, and special tools required to adjust or replace all components of equipment or systems; also, the manufacturer, type and frequency of the equipment lubrication. Special notation shall be made for cleanout, checkout, inspection, or other preventative maintenance functions.*
- 4) Troubleshooting: Information will be provided in a separate section to aid the repairman in conducting tests and instrumentation required for determining causes of malfunction or failure.*
- 5) Operating Instructions: Description of the operation, major components, and functions of the system. Special note shall be made of specific safety precautions.*
- 6) Installation Instructions: Special note shall be made of critical assembly steps - set-up, fitting, alignment, refractory dry-out schedule, and start-up and shutdown procedures.*

*All proposed equipment is supplied as a complete flange-to-flange system (including all energy recovery equipment).*

*Approval of drawings can be submitted within 4 weeks after receipt of your purchase order. Nominal shipment can be made within 14-26 weeks after our receipt of approved drawings. If a shorter time schedule is desired, it can be provided upon request depending upon the schedule for existing orders. Additional funds may be needed for the overtime required to meet the shortened schedule.*

### GUARANTEE

*Sur-Lite will guarantee a maximum destruction of hydrocarbons based on measurements taken at the inlet and outlet of the thermal oxidizer system. This guarantee is based on a minimum hydrocarbon concentration taken at the inlet of the thermal oxidizer unit.*

*Sur-Lite will accept valid Purchase Order in the following form:*

- 1) Customer Purchase Order as modified by Sur-Lite's proposal.*
- 2) A signed copy of this proposal with initial on terms of payment and terms of delivery.*
- 3) Material changes to this proposal must be noted by Sur-Lite, on Sur-Lite letterhead.*

*The information provided in this proposal contains propriety information on Sur-Lite equipment and is to be held confidential and not disclosed in any way to others inside of you company without a need to know, nor to anyone outside your company to whom the proposal is not directly*

*related.*

*Sur-Lite reserves the right to change or modify any proposed design in an effort to provide the customer with a system that is equivalent or better.*

*A preliminary process diagram and general arrangement drawing are enclosed for the proposed system.*

*We can provide start-up on a time and material basis. Our rates are \$440.00 per day for a service technician, and \$520.00 per day for a test engineer, plus travel and subsistence. We can also provide you with an installation supervisor for \$440.00 per day plus travel and subsistence. Please note that our rates are on a portal-to-portal basis. If you prefer, we can provide an turnkey project.*

**TERMS**

***30% Due with purchase order***

***30% Due with submittal of general arrangement, process schematic, and piping and instrumentation diagram***

***30% Due before shipment***

***30% Due within 30 day of shipment***

*The quoted prices are valid for 30 days from the date of this proposal. After that interval, please contact us for applicable prices.*

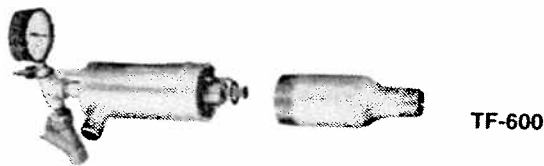
*The prices quoted in this proposal are subject to escalation. Prices will be adjusted if a rise occurs in the U.S. Bureau of Labor Statistics Producer Price Index for Total Manufacturers. Prices will be automatically adjusted at the time of shipment by the percentage increase in this index from the month of this proposal date to the month prior to the month in which shipment is made. Any price increase will be shown*

*on the invoice we submit at time of shipment, and will become due and payable at that time.*

*For additional terms and conditions not covered in this proposal, please see Terms and Conditions enclosed.*

# SUR-LITE PRODUCTS

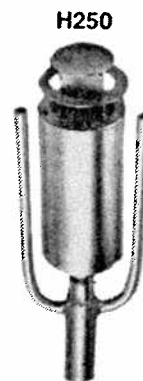
## AIR COOLED PILOTS



- Fires under most adverse conditions
- Sized for individual requirements
- Retractable models available

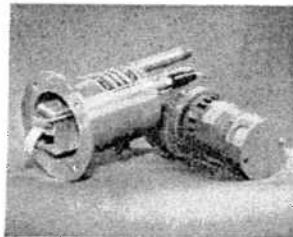
## SUR-LITE PILOT ASSEMBLIES

- Ideal in automating ignition processes
- Positive ignition in adverse draft and velocity conditions
- All stainless steel construction

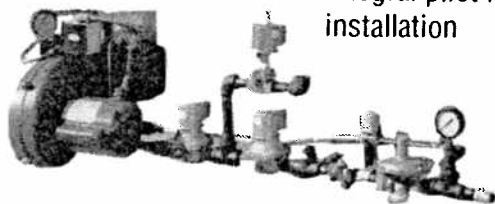


DEPENDABLE SUR-LITE PILOTS ASSURE COMBUSTION SYSTEM RELIABILITY

## TUBE BURNERS



- Capacities: 20,000 to 6,000,000 BTUH
- High performance - industrial quality
- Fuels: natural, L.P. and waste gases
- Sizes: 3" to 16", using nominal schedule 40 pipe
- Tube burners have round heads with integral pilot for easy installation



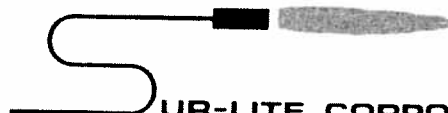
### • Applications:

Immersion tube burners  
Ovens  
Aluminum melting pots

Boilers  
Heat treating furnaces  
Kilns

## SUR-LITE COMBUSTION ACCESSORIES

- SL-500 High Temperature Ignition And Flame Rod Wire - UL listed
- Portable Hand Ignition Torch -
- Gas and Oil Fuel Trains - to meet IRI, FM and other approval requirements



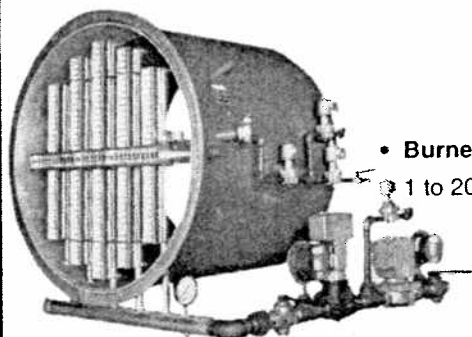
8124 Allport Avenue • Santa Fe Springs, CA 90670  
(310) 693-0796 • (800) 432-8818 • FAX: (310) 693-7564



Printed on Recycled Paper

# SUR-LITE PRODUCTS

## FLAME BATH® GAS BURNER AND FUME INCINERATOR



- **Burner Capacities:**  
1 to 200 million BTUH

- Highly efficient gas burning systems provide complete combustion of natural, L.P. and waste gases.

- **Flame Bath Burner Applications:**

Duct burners	Dryers	Furnaces
Air preheaters	Ovens	Boilers

- **Fume Incinerator Applications:**

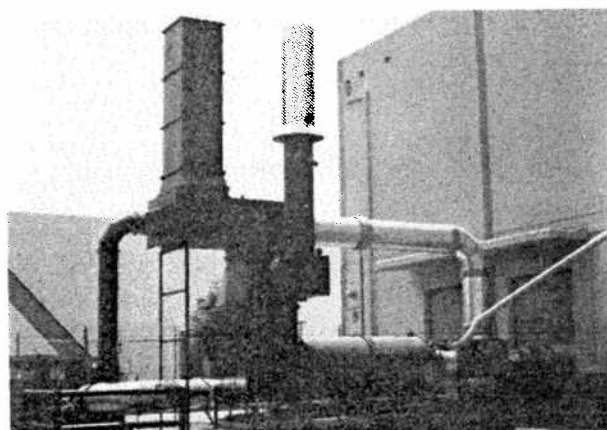
V.O.C.'s (volatile organic compounds)

- **Industries:**

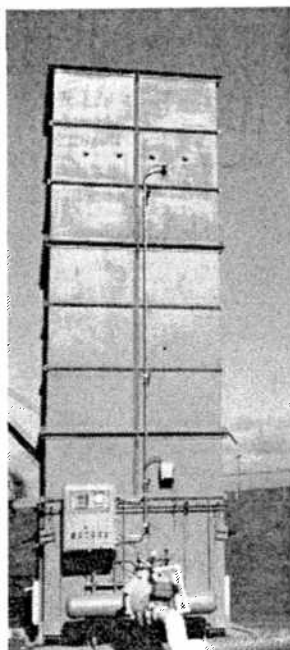
Finishing	Food processing	Semiconductor
Chemical	Refinery	

## THERMAL OXIDIZERS

- Designed to efficiently burn liquid and gaseous waste.
- Valuable exhaust can be used for preheat or to supply the needs of industry.
- Designed for easy, safe, and reliable operation.
- Specially designed for your application.
- Rental & Portable units available.



## SUR-LITE GROUND FLARES

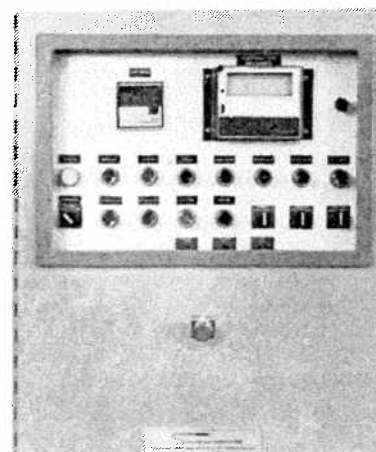


- Controls gas migration and surface emissions from landfills
- Also used for effective destruction of digester and refinery gas
- Enclosed Flame Design
- Automatic Operation
- High Destruction Removal Efficiency (DRE)
- Meets EPA, state and local regulatory standards, including California

## CONTROL SYSTEMS

- Standard and custom control systems available

- Pictured is a custom control system for a waste gas incineration process



- **Applications:**

Burners	Ovens
Furnaces	Kilns
Boilers	Fluidized Beds
Industrial Processes	





---

MANUFACTURERS OF THE FINEST PILOTS,  
BURNERS AND INCINERATION EQUIPMENT

---

---

Call toll-free (800) 432-8818  
FAX (213) 693-7564

---



# SURE LIGHT PILOTS

The pilot designed for difficult operating conditions. This new and unique pilot is the solution to chronic operating and control problems caused by erratic pilot performance. It will ignite and maintain stable flame in air velocities in excess of 6000 feet per minute. Can be used on any gas-oil or dual fuel burner system — boilers — dryers — rotary kilns — direct fired heaters — supplementary fired waste heat boilers or any other combustion application where constant dependability is a requirement. Can be operated with low or high pressure gas systems, using natural gas, propane, butane, or other hydro carbon gases, and will meet O.S.H.A. requirements.



**SURE-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670 • (310) 693-0796 • 1-800-432-8818 • FAX (310) 693-7564

# BALANCED DESIGN SOLVES PILOT STABILITY PROBLEMS

The patented aerodynamic principal that makes the SUR-LITE Pilot stable, and prevents pilot flame-outs, is a new design break-through. Due to this unique design, the air velocity on the outside of the pilot assembly and the air that passes through the pilot assembly is in a constant differential balance. Any sudden changes in air velocities on the outside of the pilot assembly will cause the same relative change inside of the pilot assembly, thus the constant differential is maintained and the SUR-LITE Pilot will remain stable with no possibility of flame-out.

The SUR-LITE Pilot is a raw gas pilot, with an extended venturi mixing head assembly. This design is not subject to clogging by foreign material in the air stream. SUR-LITE Pilots have been operating in difficult and dirty installations for years with little or no maintenance problems. Air velocities in excess of 6000 FPM, which are encountered in some large boiler burner systems, present no problem for the SUR-LITE Pilot. Even under these operating conditions, the SUR-LITE Pilot will provide a smooth, fast light off of main burner system.

The lighting efficiency of the main burner is exceptional because of the hot pilot flame and a steady fire during the initial critical light off period. The SUR-LITE Pilot does not require a pilot pressure regulator. Select the proper model and orifice size according to your burner's requirements and the plant gas pressure. Each pilot will maintain a dependable flame over the range of pressure indicated in the curve on the spec. sheet. The pilot gas supply line must have a line filter or "Y" strainer in same as indicated in the installation instructions.

The flame safeguard specialist will be most interested in the flame sensing procedure using the SUR-LITE Pilot. We recommend the UV sensor for the majority of applications. The flame rod may be used for lower velocities and those applications where UV does not apply.

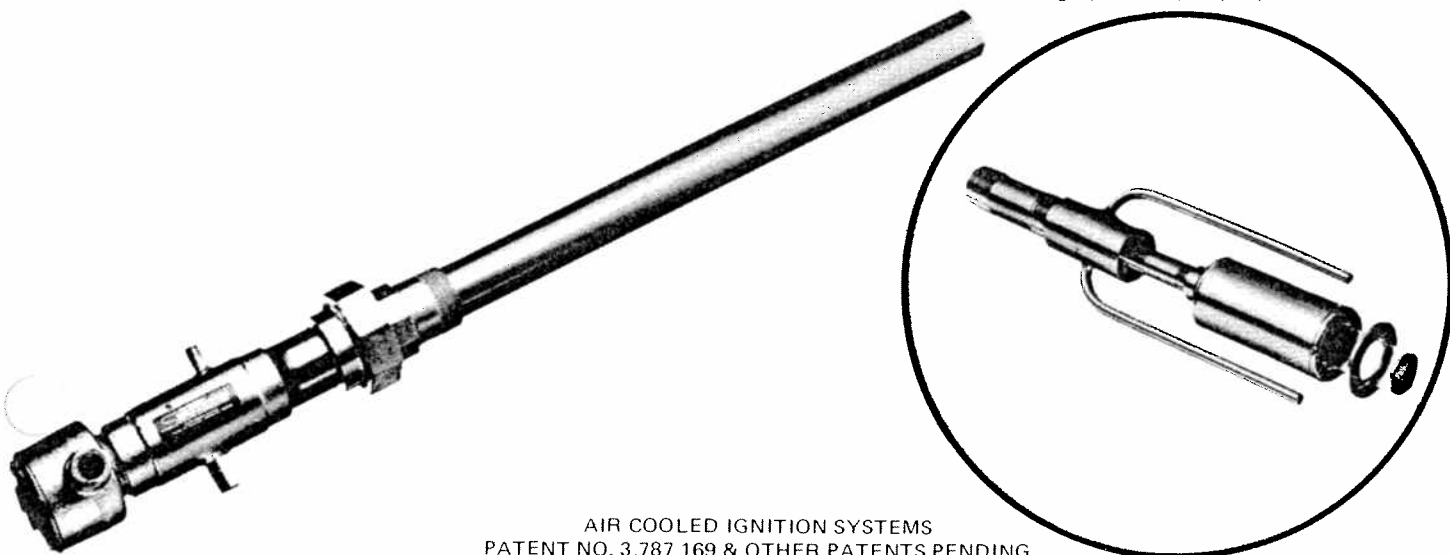
The pilot flame should be scanned just ahead of the pilot according to gas pressures and air velocities of the system.

The installer can use good judgement in installation so that the pilot flame cuts across the main flame pattern and the pilot burner itself is out of the main flame. Specific applications and suggestions are available from the distributor.

We recommend that the air source for the pilot be from the back of the pilot for best operation.

## SUR-LITE AIR-COOLED IGNITION SYSTEMS


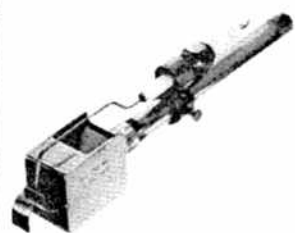
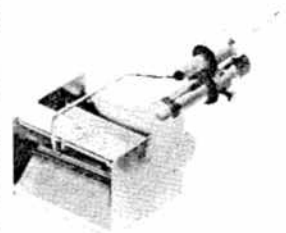
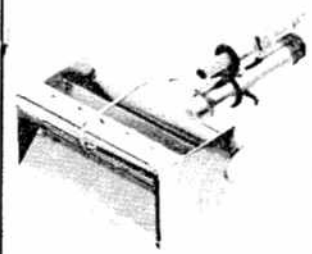
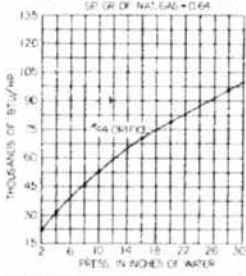
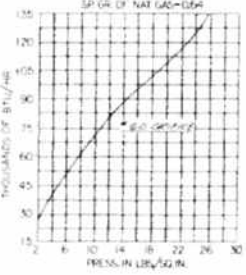
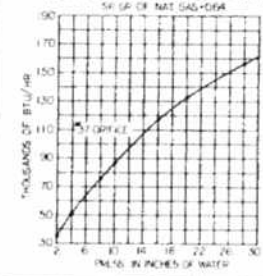
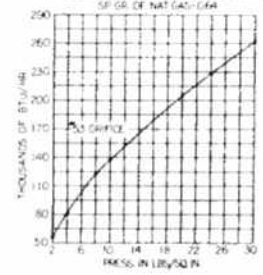
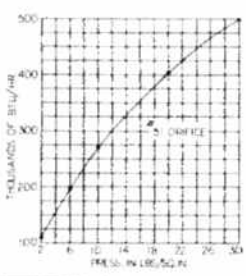
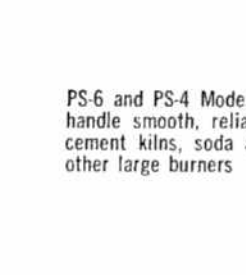
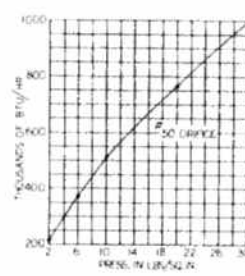

**NEW** Sur-Lite Retractable Air Cooled Ignition System with heat releases from 50,000 BTU/Hr, up to and exceeding 15,000,000 BTU/Hr - for Kilns, Dryers, C O Furnaces, High Pressure Direct Fired Heaters, Sulphur Recovery Units, Power Plant Utility Boilers, etc. - Will operate on natural gas, butane, or propane.



AIR COOLED IGNITION SYSTEMS  
PATENT NO. 3,787,169 & OTHER PATENTS PENDING

# SIZES & SPECIFICATIONS CHART

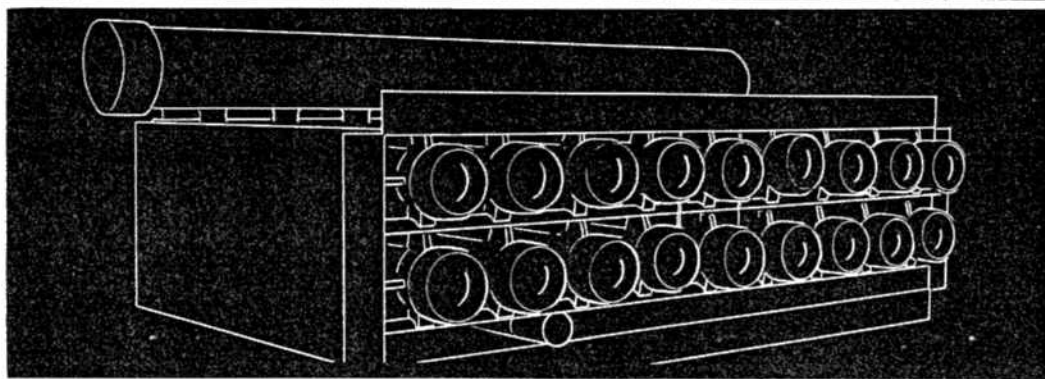
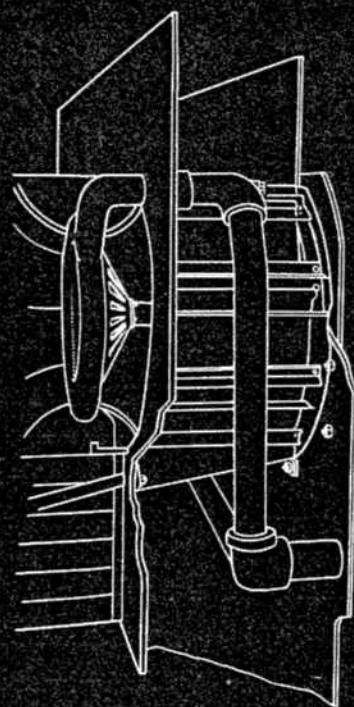
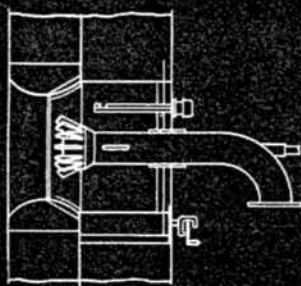
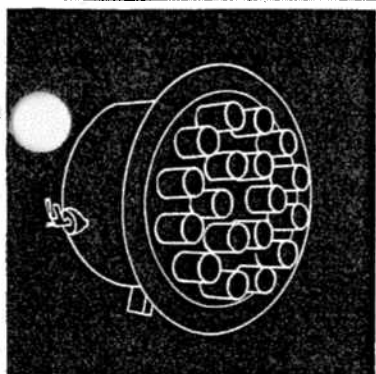
Patented & patents pending, 3,302,687 & 3,457,902

MODEL	P-2	P-1	PS-4	PS-6
ILLUSTRATION				
GAS INPUT AND BTU OUTPUT	2 PSI to 30 PSI 22,500 to 90,000 BTU 2" WC to 30" WC 30,000 to 118,000 BTU	2 PSI to 30 PSI 65,000 to 265,000 BTU 2" WC to 30" WC 48,000 to 190,000 BTU	2 PSI to 30 PSI 100,000 to 500,000 BTU	2 PSI to 30 PSI 200,000 to 1,000,000 BTU
CONSTRUCTION	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
RECOMMENDED BURNER SIZE	500,000 to 15,000,000	10,000,000 to 50,000,000	35,000,000 to 100,000,000	100,000,000 up
PERFORMANCE CURVE  (CHARTS BASED ON 1000 BTU/CU. FT. & 0.64 SP. GR. NAT. GAS)	<p>LOW PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>INCHES OF WATER</p> <p>HIGH PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>PSI OR LB./SQ. IN.</p>	<p>LOW PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>INCHES OF WATER</p> <p>HIGH PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>PSI OR LB./SQ. IN.</p>	<p>LOW PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>INCHES OF WATER</p> <p>HIGH PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>PSI OR LB./SQ. IN.</p>	<p>LOW PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>INCHES OF WATER</p> <p>HIGH PRESS. GAS SUPPLY FOR HYDRO SAFETY PILOT SP. GR. OF NAT. GAS = 0.64</p>  <p>THOUSANDS OF BTU/Hr</p> <p>PSI OR LB./SQ. IN.</p>

PS-6 and PS-4 Models were especially designed to handle smooth, reliable lightoff of utility boilers, cement kilns, soda ash dryers, alfalfa dryers and other large burners

## SPECIFICATIONS

## SUGGESTED APPLICATIONS for SUR-LITE PILOT



## INSTALLATION & OPERATING INSTRUCTIONS

1. The SUR-LITE PILOT should be installed in such a manner that the air flow is from the back side (gas supply connection end) of the pilot head.
2. The SUR-LITE PILOT should be located in such a manner that it provides instant ignition of the main burner. Good combustion practice should be used in locating the SUR-LITE PILOT relative to the main burner system. In general, it should be located one inch away from the main burner, and a minimum of two inches in back of the main burner.
3. For details on UV scanner tube location relative to the SUR-LITE PILOT consult the instruction sheet that is supplied with the pilot.
4. The location of the flame rod relative to the SUR-LITE PILOT head should be determined by following the flame safeguard control supplier recommendation, and good combustion practices. In general, the flame rod system should not be used in high velocity air streams (consult the distributor for a flame rod application in high-velocity or high-temperature air systems).
5. A pipe strainer must be installed in the gas supply to the SUR-LITE PILOT. The location of the strainer, relative to the pilot head, should be as close as good piping practices will allow. The perforations in the pipe line strainer screen should not exceed 1/32" in size.
6. The spark ignition assembly, and the flame rod assembly, can be adjusted to any location to meet the specific burner application. When the SUR-LITE PILOT system is to be used in a high-temperature air stream (above 500° F), contact the distributor for information on special spark ignition system requirements.
7. SUR-LITE PILOT units are orificed as shown on the respective flow charts for high pressure gas. For low pressure gas service, re-orifice to the drill size shown on the low pressure gas flow chart.

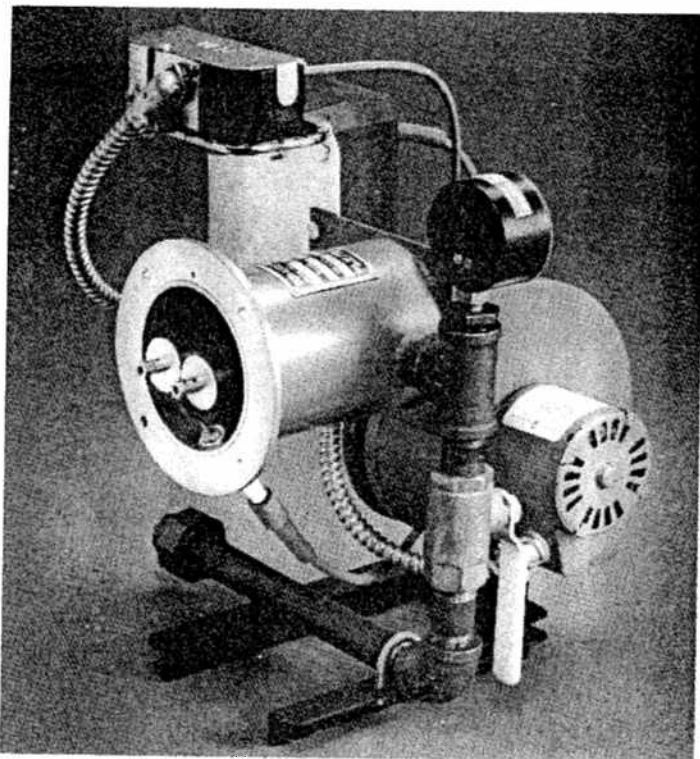
## PARTIAL LIST OF SUR-LITE PILOT APPLICATIONS

Supplementary-fired turbine exhaust  
Driers  
Fume incineration  
Burning spent sulphite liquor  
Heat treating furnaces  
Crude oil burning  
Ovens  
Waste liquid disposal by incineration  
Marine boilers  
Refinery heater  
Hydrogen generator  
Boilers  
Soda ash dryer  
Cement Kilns

Your Sales Agent

# BP1A-C

## 4" Tube Burner Model II



**30,000 to 500,000 BTU/HR**

- 126 Watt, 115 VAC, Single Phase, Open Drip-proof, Forward Curve Motor *listing under UL File #E47479*
- 118 CFM Free Air, 42 CFM - 1.2" WC
- Main Gas Connection 1/2" NPT @ 8" WC
- Spark Ignitor and/or flame rod
- 1/2" NPT Scanner Connection
- Safe - set up for Flame Supervision Equipment
- Blower replacement available anywhere in the United States
- Spark Ignited Main Burner—*No Pilot*
- Complete Combustion
- SAFE • COMPACT • ECONOMICAL

This newly developed Sur-Lite Tube Burner is versatile, compact and economical. It gives **complete** combustion, saving you money by burning ALL YOUR FUEL. It features direct spark ignition—no pilot burner. Variable BTU output obtained by varying only the gas supply pressure. Ideal for many applications.

### Gas fired applications include:

- Natural gas conversion to LPG and vice-versa
- Residential Indirect Fired Furnaces
- Crucible Furnaces
- Oil conversion burners for residential and commercial boilers
- Immersion Tube Burners
- Gravity Furnaces
- Any general usage power burner

### Options include:

- Multi Burner Applications—units may be ordered without blowers to utilize common blower and gas control systems
- Flame Rod Supervision is available
- Specially constructed units to fit any application



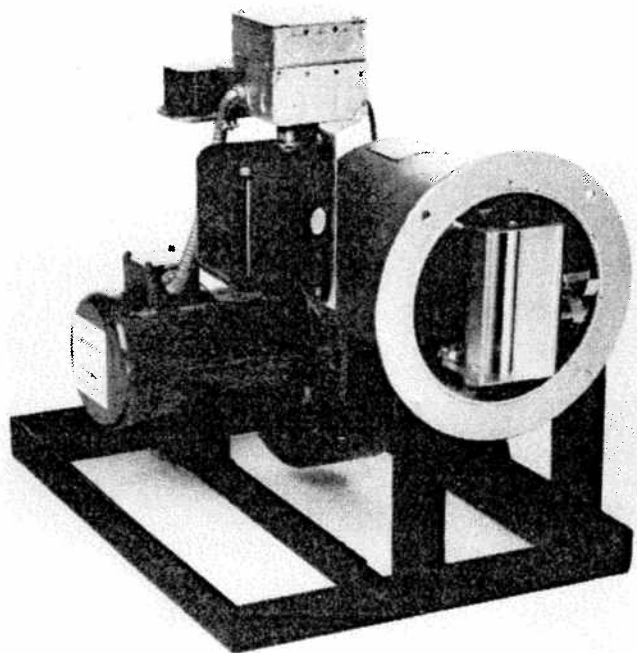
**SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

(213) 693-0796  
(213) 698-9432  
FAX: (213) 693-7564

# TB-800 8" Tube Burner

Model 12029 Range 1 to 4 with 300 Blower



- 35,000 to 1,500,000 BTU/HR
- Standard 1/3 H.P., 3450 RPM
- 110 VAC, 240 VAC, 480 VAC
- Safe
- Compact
- Economical
- Self-Cleaning Radial Blade Fan
- Blower Wheel, Dynamically Balanced
- Complete Combustion

The Sur-Lite TB-800 Tube Burner is versatile, compact and economical. It gives **complete** combustion, saving you money by burning ALL YOUR FUEL. It features a radial blade type, dynamically balanced, self-cleaning blower. Variable BTU output and a selection of operating voltages makes this burner ideal for many applications.

Includes 1½" NPT Main Gas Connection, 3/8" NPT Pilot Gas Connection, 3/4" Site Glass, 3/4" Scanner Connection, Spark Ignitor, Blower with Manual Damper. Burner Electrical Assembly #12031-09, Ignition Transformer, Bracket, Air Flow Switch, Electrical Junction Box, Wiring, and Piping.

## Gas fired applications include:

- Furnaces
- Ovens
- Afterburners
- Holding & Boiling Pots (600# and up)
- Boilers
- Immersion Tube Heaters
- Any general usage power burner

## Options include:

- Modulating Damper
- Single or 3 Phase Motors
- Totally Enclosed Fan Cooled Motor
- Variable Sequence Functions

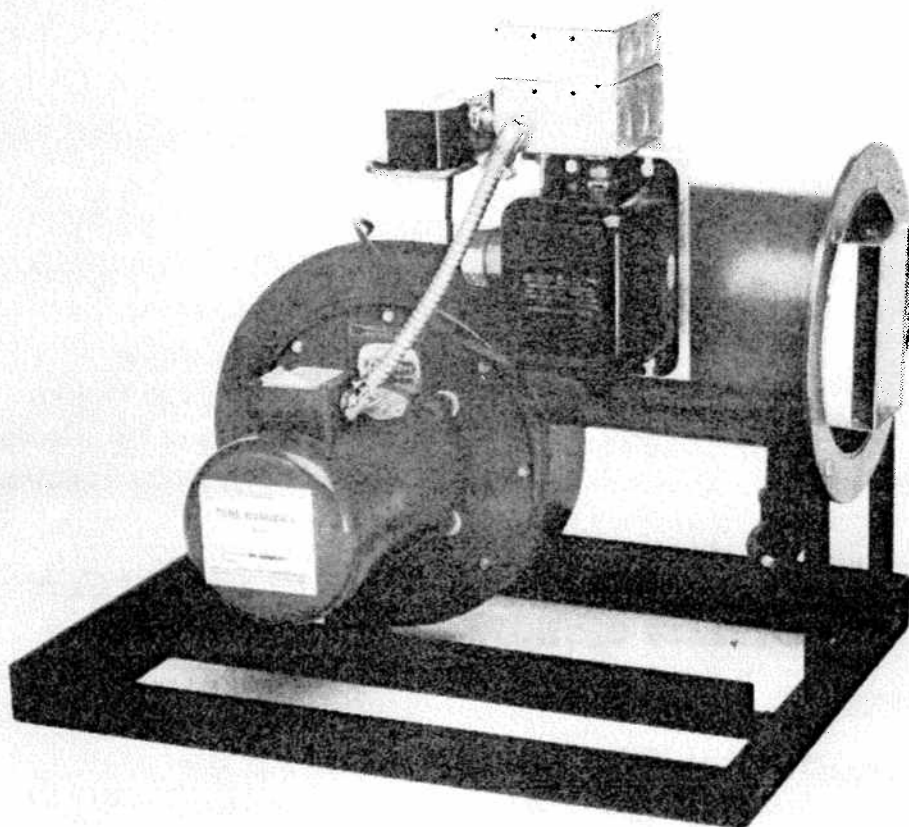
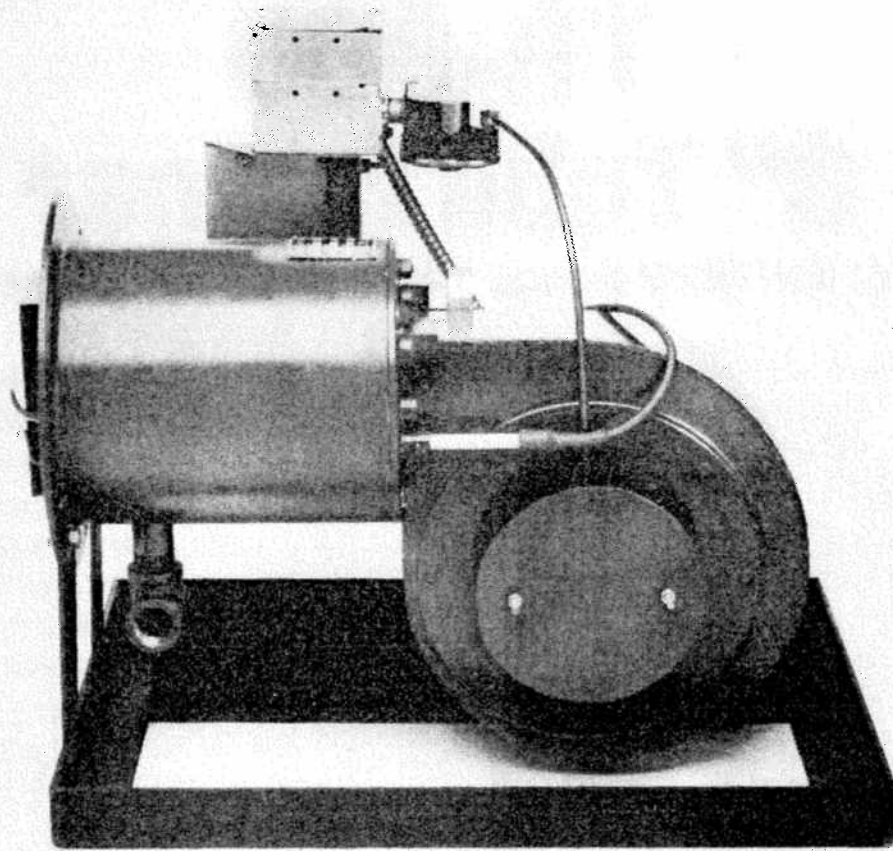
***SUR-LITE LO-NOX BURNER <40 PPM @ 3% OXYGEN***



**SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

(213) 693-0796  
(213) 698-9432  
Telex: 67-7373



(310) 693-0796  
(800) 432-8818  
FAX: (310) 693-7564



## **SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

February 21, 1995

Mr. George Cosby  
Vice-President  
Calmat  
3200 San Fernando Road  
Los Angeles, CA 90065

RE: *Sur-Lite Proposal #95067/Hewitt Landfill Condensate Destruction System*

Mr. Cosby:

Sur-Lite is pleased to quote the installation of a Condensate Destruction System for the John Zink flare located at the Hewitt Landfill. SCS has stated that the maximum flow of condensate would be 500 gallons of condensate per day or .35 gallon per minute.

Sur-Lite Corporation has been manufacturing special liquid waste burning systems since 1962. The liquid waste burning system is capable of handling anything from light diesel fuel to water, tars, and pitches. The burner is not an internal mix burner, but it has an open oil ring over which the atomizing air flows. This creates a negative pressure in the oil ring, allowing for even distribution of liquid on the oil ring that causes the liquid to be vaporized. The special nozzle design makes it possible to handle liquid with solids in the fluid flow. The unit is designed to have support fuel in the center of the nozzle, as well as support fuel along side of the nozzle to help vaporize liquid waste or condensate.

Benefits of the Sur-Lite Condensate Destruction System include:

- \* *Allows for future auxiliary fuel injection.*
- \* *Reduces NOX.*
- \* *Eliminates refractory damages.*
- \* *Protects burners and manifolds from condensate impingement.*
- \* *Skid-mounted means easy installation.*
- \* *Reduces thermocouple wear.*
- \* *Eliminates condensate disposal costs.*

- \* *Operates at the flares minimum flow rate.*
- \* *Sur-Lites' liquid waste burn system has been an industry standard since 1962.*
- \* *Destroys condensate before the condensate enters the flare.*

*The Sur-Lite Condensate Destruction System saves money and maintenance resources over any other condensate injection system.*

*The Condensate Destruction System includes the following items:*

- *Sur-Lite Liquid Waste Burner designed to inject .35 GPM of condensate into the existing flare.*
- *A small combustion air fan.*
- *A landfill gas fuel train and pilot fuel train.*
- *An atomizing air train.*
- *A condensate injection pump.*
- *An air compressor.*
- *A Nema 4 control panel.*
- *A condensate destruction system combustion chamber.*
- *A small condensate holding tank.*
- *All of the above items would be skid mounted.*

*A section of the flare wall will need to be removed to house the destruction system.*

*The system runs on 440 V, 3 phase power and will require connection to your landfill gas system and your condensate collection system. Generally, the nozzle will require the use of waste gas to assure maximum destruction of all organics entrained in the liquid stream. The Sur-Lite injection nozzle can handle particle sizes up to 1/8" in diameter. For specific information on the Sur-Lite Condensate Destruction Nozzle, please see Sur-Lite brochure LW-91-6000-01.*

*The Sur-Lite equipment will need at least the following to be supplied by others:*

- *Concrete foundations, pads, and steel support structure.*
- *Connection of all utilities to the condensate injection system terminal points, including 440 volt, 3 phase, 60 Hz power connection and fused and unfused disconnects, regulated pressure natural gas at 5 PSIG to the burner mounted on the flare.*
- *Any permits, air pollution control approvals, and any other regulatory documents which may be required.*
- *Remote control panel and interconnecting wiring between the local and remote control panels.*
- *Piping and conduit required to and from the Sur-Lite supplied equipment.*
- *Installation and assembly of condensate injection system on site.*
- *Start-up.*
- *Air pollution compliance testing.*
- *Taxes, including sales and use taxes for all components, labor and services to be provided as part of this contract.*
- *Any items not stated specifically supplied by Sur-Lite Corporation in this proposal.*
- *Coordination of installation activities with landfill operator relative to gas system operations.*
- *Any testing procedures required.*

*We can provide start-up on a time and material basis. Our rates are \$576.00 per day for a service technician, and \$720.00 per day for a test engineer, plus travel and subsistence. We can also provide you with an installation supervisor for \$576.00 per day plus travel and subsistence. Please note that our rates are on a portal-to-portal basis.*

*Sur-Lite will provide three (3) copies of the Operating and Maintenance Manuals prior to shipment of the system.*

*Sur-Lite Corporation can provide the condensate injection system described above for a price of \$41,500.00 F.O.B. Santa Fe Springs, CA, exclusive of applicable taxes and fees.*

*Sur-Lite Corporation will provide one (1) day of start-up assistance in the above listed price.*

*Terms of payment are as follows:*

- \* 30% due with purchase order*
- \* 30% due with drawing submittal*
- \* 30% due upon receipt of approval drawings*
- \* 10% due with delivery of equipment*

*Approval drawings can be submitted within fourteen (14) days after receipt of your purchase order. Nominal shipment can be made within eight (8) weeks after our receipt of approved drawings.*

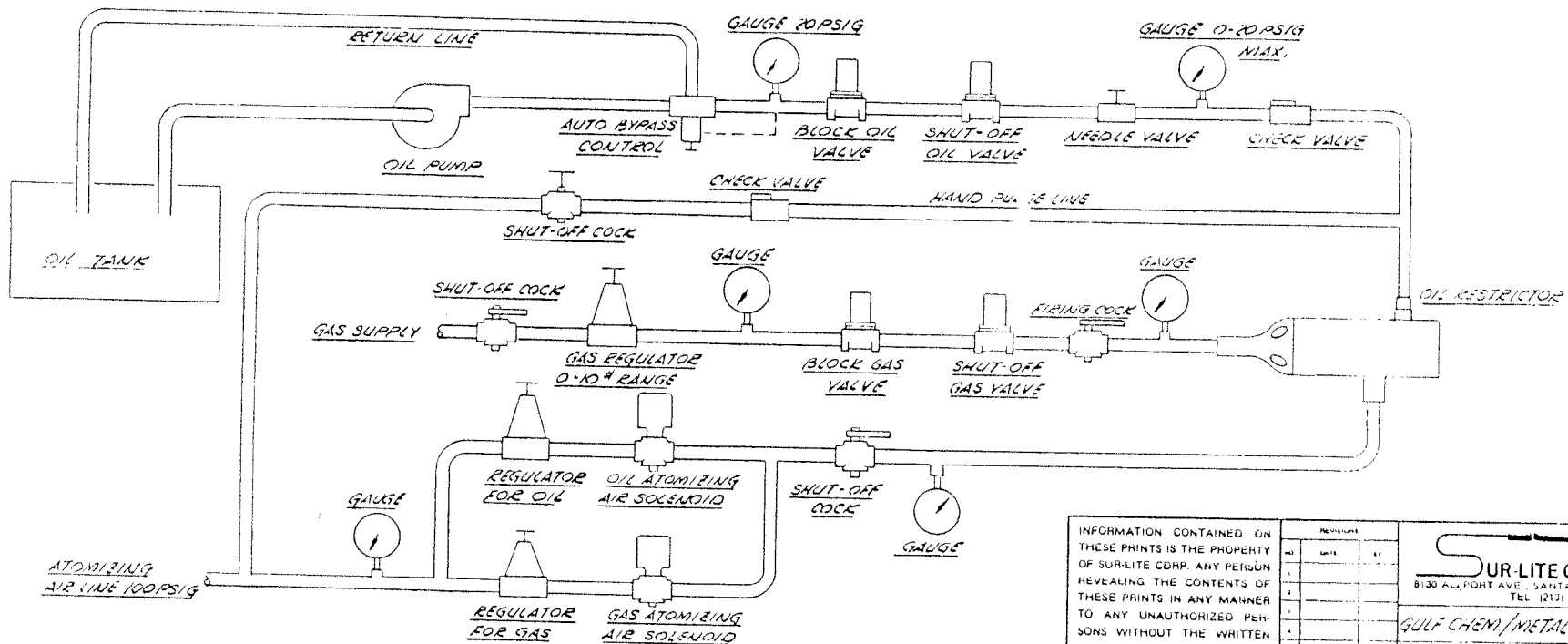
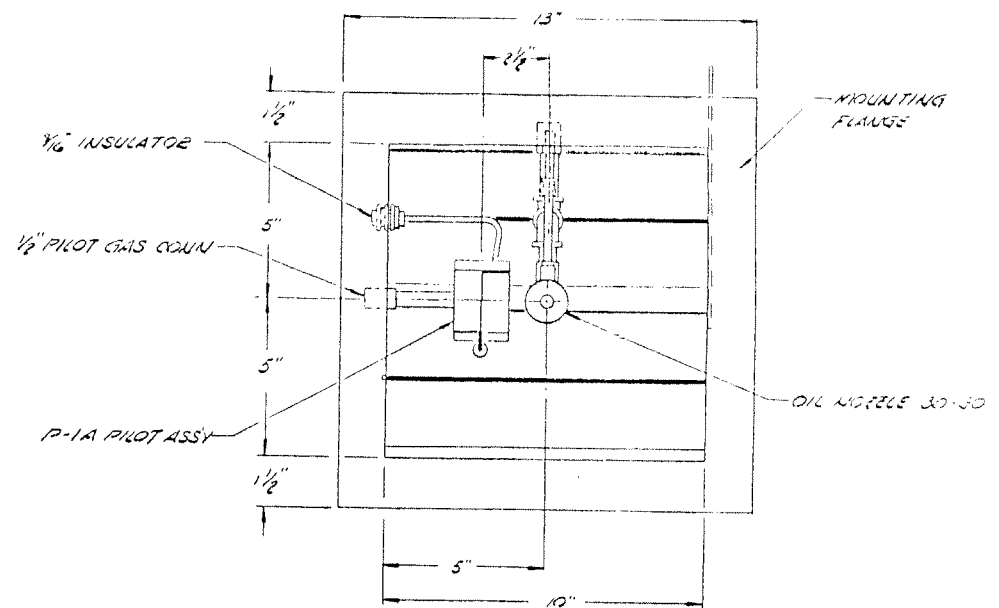
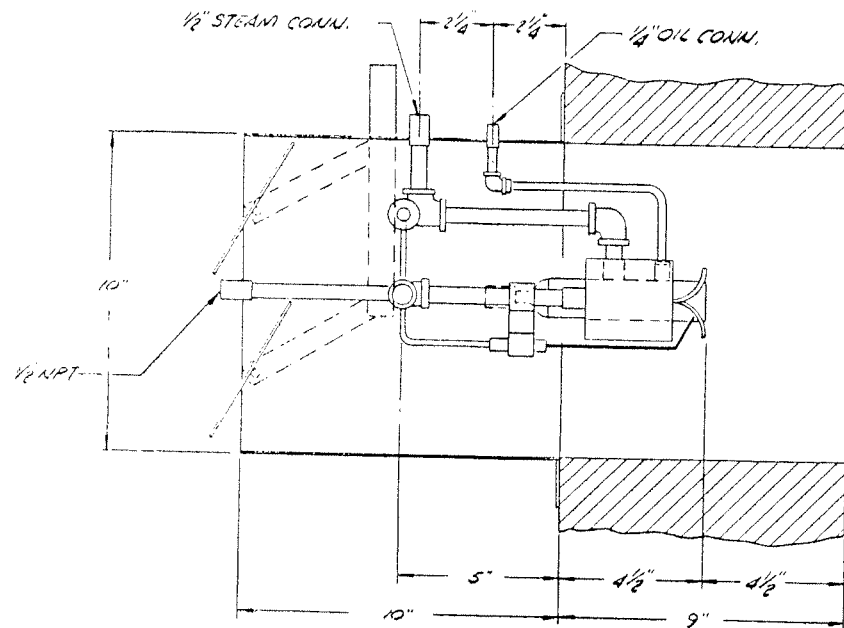
*Please let me know if you require any additional information, I can be reached at (800) 432-8818.*

*Sincerely,*



*Wanda Cudmore  
Sur-Lite Corporation*

*cc: Jim Bier, SCS Field Services*



INFORMATION CONTAINED ON THESE PRINTS IS THE PROPERTY OF SUR-LITE CORP. ANY PERSON REVEALING THE CONTENTS OF THESE PRINTS IN ANY MANNER TO ANY UNAUTHORIZED PERSONS WITHOUT THE WRITTEN CONSENT FROM SUR-LITE CORP. WILL BE SUBJECT TO PROSECUTION.

REVISIONS			DATE		BY
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

**SUR-LITE CORPORATION**  
8130 ALPINE AVE. SANTA FE SPRINGS, CA 90670  
TEL (213) 633-0700

**GULF CHEM/METAL SETTLER BURNER**

DESIGN NO. **117410** SCALE **NONE** DATE **9-25-70** DRAWN BY **6015**

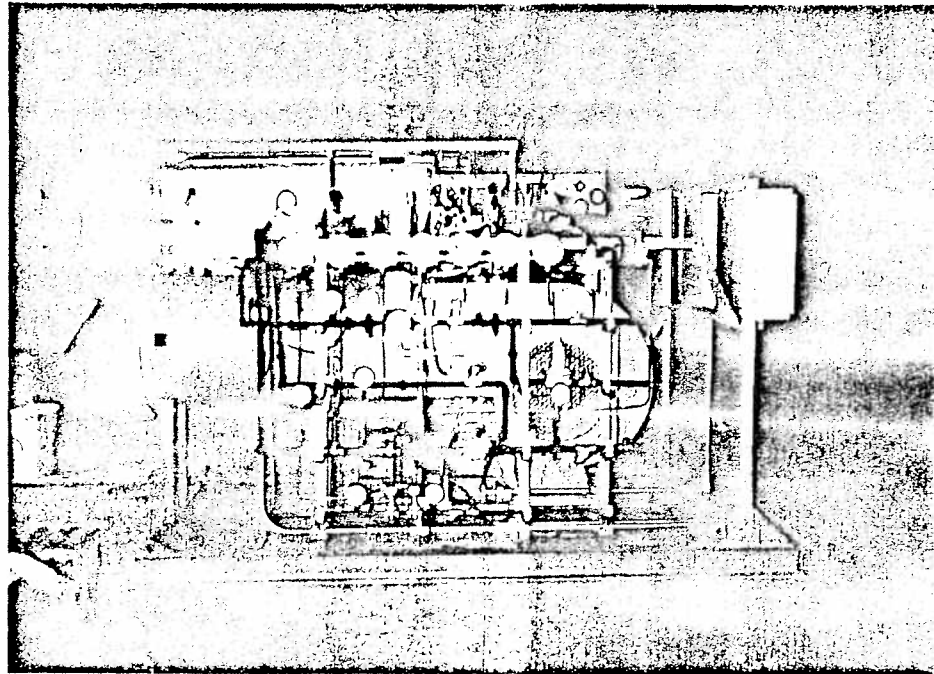
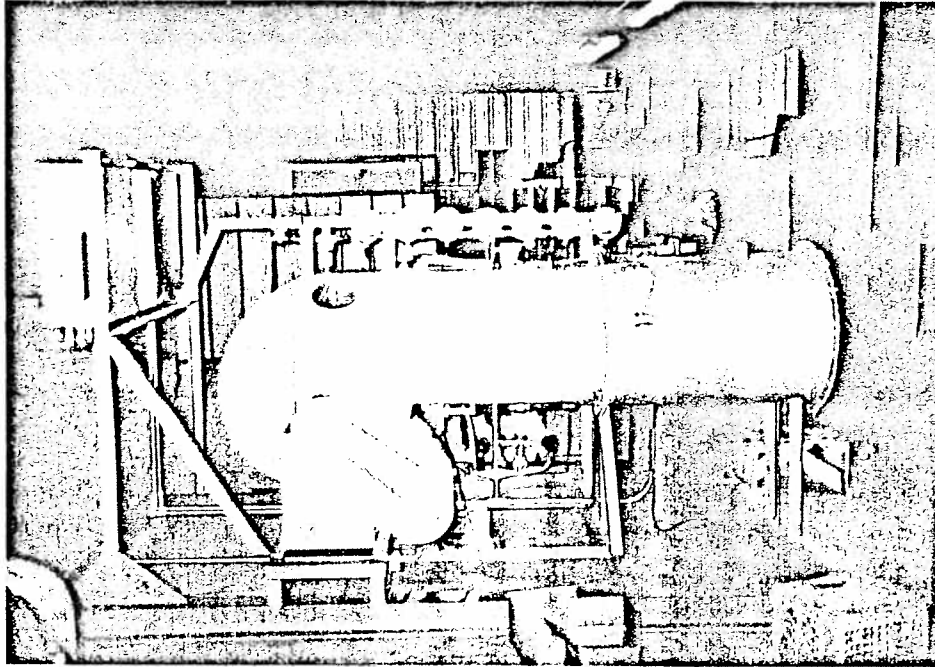
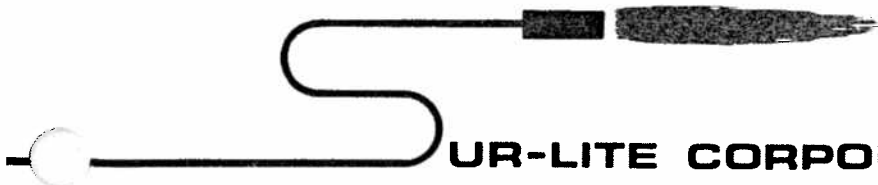


Figure 1 - Photographs of Sur-Lite Liquid Waste Burner



(310) 693-0796  
(800) 432-8818  
FAX: (310) 693-7564

## **SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

### **SUR-LITE'S HIGH BTU WASTE GAS FLARING SYSTEM**

*The Sur-Lite Flaring System is the result of 25 years of waste gas combustion experience. Sur-Lite has developed flaring systems for customers across the North American continent. The Sur-Lite Flaring System is designed to perform at a very high Destruction and Removal Efficiency (DRE) while controlling oxides of nitrogen (Nox) and carbon monoxides (CO). The Sur-Lite Flaring Systems is low cost, user friendly, and maintenance simple.*

#### *Advantages of Sur-Lite Flaring System:*

- *Designed with optional or integral fuel filter*
- *Patented Sur-Lite Pilot Ignition System (Will Light Every Time)*
- *Controls in NEMA 4 Enclosure (Suitable for Outdoor Installation)*
- *Temporary/Rental Flares Available*
- *Guaranteed Low Carbon Monoxide Emissions (0.20 LBS Per mm BTU)*
- *Guaranteed Conformity to Local Air Quality Management District Requirements for Both Approval to Construct & Approval to Operate*
- *Designed with optional or integral Condensate Injection System*
- *Sur-Lite Flame Bath Burners (High DRE, Low NOX, Low CO)*
- *Guaranteed any Turn-Down (Minimum Flow) and Meet AQMD Requirements*
- *Guaranteed Low NOX Emissions (0.06 NOX Per MM BTU)*
- *Guaranteed 95% Destruction & Removal Efficiency*

*Sur-Lite offers the following installations as an index of our most recent experience:*

<i>City of Tacoma, WA</i>	<i>500 SCFM Flare</i>	<i>1986</i>	<i>Madison</i>
<i>US EPA, Uniontown, OH</i>	<i>200 SCFM Flare</i>	<i>1986</i>	<i>Oceanside</i>
<i>McFarland Energy, CA</i>	<i>420 SCFM Flare</i>	<i>1986</i>	<i>Sacramento</i>
<i>City of Mountain View, CA</i>	<i>400 SCFM Flare</i>	<i>1987</i>	<i>Madison</i>
<i>Orange County Sanitation District, CA</i>	<i>750 SCFM Flare</i>	<i>1987</i>	<i>Madison</i>
<i>City of Sunnyvale, CA</i>	<i>1200 SCFM Flare</i>	<i>1987</i>	<i>Sunnyvale</i>
<i>City of Mountain View, CA</i>	<i>1000 SCFM Flare</i>	<i>1987</i>	<i>Hawks Prairie</i>
<i>County of San Bernadino, CA</i>	<i>2000 SCFM Flare</i>	<i>1987</i>	<i>Milliken</i>
<i>Santa Fe Energy, CA</i>	<i>400 SCFM Flare</i>	<i>1987</i>	<i>Sunnyvale</i>
<i>Hawks Prairie, CA</i>	<i>1350 SCFM Flare</i>	<i>1987</i>	<i>Hawks Prairie</i>
<i>Golden Eagle, CA</i>	<i>250 SCFM Flare</i>	<i>1988</i>	<i>Oceanside</i>
<i>US Air Force, Luke Air Force Base</i>	<i>Vapor Transfer</i>	<i>1988</i>	<i>Special</i>

<i>County of Contra Costa, CA</i>	<i>1600 SCFM Flare</i>	<i>1988</i>	<i>Sacramento II</i>
<i>City of Oceanside, CA</i>	<i>200 SCFM Flare</i>	<i>1988</i>	<i>Oceanside</i>
<i>City of Alameda, CA</i>	<i>450 SCFM Flare</i>	<i>1988</i>	<i>Madison</i>
<i>Dane County Landfill, PA</i>	<i>750 SCFM Flare</i>	<i>1989</i>	<i>Madison</i>
<i>Palo Alto, CA</i>	<i>1000 SCFM Flare</i>	<i>1989</i>	<i>Hawks Prairie</i>
<i>Paradise Valley, CA</i>	<i>350 SCFM Flare</i>	<i>1989</i>	<i>Chollas</i>
<i>City of Riverside, CA</i>	<i>666 SCFM Flare</i>	<i>1990</i>	<i>Madison</i>
<i>City of San Clemente, CA</i>	<i>350 SCFM Flare</i>	<i>1990</i>	<i>Chollas</i>
<i>Mammoth County, NJ</i>	<i>1200 SCFM Flare</i>	<i>1990</i>	<i>Sunny Vale</i>
<i>Arizona Street Landfill, CA</i>	<i>350 SCFM Flare</i>	<i>1990</i>	<i>Chollas</i>
<i>City of Whittier, CA</i>	<i>2000 SCFM Flare</i>	<i>1990</i>	<i>Milliken</i>
<i>Orange County Sanitation District, CA</i>	<i>750 SCFM Flare</i>	<i>1990</i>	<i>Madison</i>
<i>City of Upland, CA</i>	<i>600 SCFM Flare</i>	<i>1991</i>	<i>Madison</i>
<i>City of Huntington Beach, CA</i>	<i>100 SCFM Flare</i>	<i>1991</i>	<i>Nina</i>
<i>Town of North Hemstead, NY</i>	<i>2400 SCFM Flare</i>	<i>1991</i>	<i>Milliken</i>
<i>City of Montebello, CA</i>	<i>400 SCFM Flare</i>	<i>1992</i>	<i>Chollas</i>
<i>County of Ventura, CA</i>	<i>2400 SCFM Flare</i>	<i>1992</i>	<i>Milliken</i>
<i>Petroleum Recycling, CA</i>	<i>Vapor Transfer</i>	<i>1992</i>	<i>Nina</i>
<i>Angus Petroleum, CA</i>	<i>200 SCFM Flare</i>	<i>1993</i>	<i>Oceanside</i>
<i>Santa Margarita, CA</i>	<i>755 SCFM Flare</i>	<i>1993</i>	<i>Madison</i>
<i>Dessor, CA</i>	<i>600 SCFM Flare</i>	<i>1993</i>	<i>Madison</i>

*It is general practice to design a flare with a refractory lined (4½" lite weight castable) bottom and stack sides. Sur-Lite offers ceramic stack sides on some special installations. The temperature control loop includes either manual or automatic (motor operated) dampers, temperature sensors, temperature controller, site ports, pilot with flame safeguard, flame arrestor and motor operated shutoff valve. Generally, Sur-Lite designs for 0.5 of a second or greater retention time. The combustion air damper system controls the stack temperature at 1400° F or greater. If the stack temperature is less than 1400° F, the control system will cause the dampers to drive closed, reducing the excess air and causing the stack temperature to rise. If the stack temperature is more than 1400° F, the control system will cause the dampers to drive open, causing the fame temperature to fall. Although standards vary nationally, Sur-Lite recommends four (4) 4" capped nipples across one side of the flare stack to serve as test ports: generally the ports should be 4' to 6' from the top of the stack.*

*For twenty years Sur-Lite has manufactured High Efficiency Low Nox (natural draft) thermal oxidizers. Sur-Lite has manufactured unites of both the rectangular and circular design. Since the early seventies, the South Coast Air Quality Managements District (SCAQMD) has gradually increased its requirements for "Best Available Control Technology". As the demand for lower emissions increased, Sur-Lite found that the circular flares were marginal in meeting standards. By the early eighties Sur-Lite's collected data indicated that the Sur-Lite burner worked more effectively in rectangularly designed flares. Sur-Lite's experience indicates that the rectangular flare in combination with Sur-Lite Flame Bath Burners is a necessary combination of components required to meet Air Quality Standards. The Sur-Lite Flame Bath Burner is a uniquely designed self-aspirating raw gas burner. As applied to Landfill, Digester and Vent gases, the success is unparalleled. A second issue involved in High Destruction Efficiency and Low Nox and Low CO generation is a good bottom section mixing of combustion air and waste gases. The rectangular design allows for placement of dampers in a position consistent with the burner and manifold arrangement. This enables a ready supply of excess oxygen per cubic of waste gas burned, generating controlled bottom section temperatures and effective mixing throughout the flare. In the traditional context High Destruction Efficiency is attributed to three factors--time, temperature, and turbulence. In fact, turbulence is defined a high degree of excess combustion air and waste gas mixing. The Sur-Lite Flame Bath Burner and appropriately placed dampers are essential ingredients of effecting High Destruction Efficiency while maintaining Low Nox and Low CO emissions.*

Sur-Lite's experience indicates that a successfully designed ground flare relies on the air being combined with the gases effectively across the bottom section of the combustor. Rectangular design provides significant temperature gradient across the bottom section of the flare generating significant off the wall turbulence. As you will see in the next pages, Sur-Lite manufactures a range of enclosed flares incorporating the rectangular design from 2.25 MM BTU's to units in excess of 100 MM BTU's. All have been tested in the South Coast Air Quality Management District and in other Districts across the U.S. and have successfully met Air Quality standards.

The are nine Sur-Lite standard enclosed flaring systems:  
(Other models are available upon request)

#### **SUR-LITE MODEL "NINA"**

Foot Print 40" x 40"  
w/ Fuel Filter 76" x 40"  
Stack Height 16'  
Waste Gas Pressure 12" WC or greater  
Weight 7,000lbs Castable/4,000lbs Ceramic  
Max. Heat Release 2.25 MM BTU/HR\*  
Min. Heat Release 0.5 MM BTU/HR  
Drawing No. 8500-033

#### **SUR-LITE MODEL "CHOLLAS"**

Foot Print 55" x 61"  
w/ Fuel Filter 92" x 61"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 14,500lbs Castable/9,500lbs Ceramic  
Max. Heat Release 10.5 MM BTU/HR\*  
Min. Heat Release 2.1 MM BTU/HR  
Drawing No. 8500-071

#### **SUR-LITE MODEL "HAWKS PRAIRIE"**

Foot Print 108" x 102"  
w/ Fuel Filter 148" x 102"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 25,000lbs Castable/16,000lbs Ceramic  
Max. Heat Release 30 MM BTU/HR\*  
Min. Heat Release .6 MM BTU/HR  
Drawing No. 8500-029

#### **SUR-LITE MODEL "SACRAMENTO"**

Foot Print 120" x 108"  
w/ Fuel Filter 180" x 108"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 38,500lbs Castable/26,000lbs Ceramic  
Max. Heat Release 45.5 MM BTU/HR\*  
Min. Heat Release 9.0 MM BTU/HR

#### **SUR-LITE MODEL "PRIMA"**

Foot Print 139" x 139"  
w/ Fuel Filter 179" x 139"  
Stack Height 40', 60', 80', 100'  
Waste Gas Pressure 16" WC  
Weight 49,700lbs  
Max. Heat Release 112.5 BTU/HR\*  
Min. Heat Release 18.9 MM BTU/HR  
Drawing NO. 8500-0080

#### **SUR-LITE MODEL "OCEANSIDE"**

Foot Print 49" x 49"  
w/ Fuel Filter 89" x 49"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 13,700lbs Castable/8,000lbs Ceramic  
Max. Heat Release 7.5 MM BTU/HR\*  
MIN. Heat Release 1.5 MM BTU/HR  
Drawing No. 8500-0065

#### **SUR-LITE MODEL "MADISON"**

Foot Print 83" x 83"  
w/ Fuel Filter 123" x 83"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 22,500lbs Castable/14,500lbs Ceramic  
Max. Heat Release 22.5 MM BTU/HR\*  
MIN. Heat Release 4.5 MM BTU/HR  
Drawing No. 8500-0067

#### **SUR-LITE MODEL "SUNNYVALE"**

Foot Print 112" x 106"  
w/ Fuel Filter 152" x 106"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 36,500lbs Castable/24,000lbs Ceramic  
Max. Heat Release 36 MM BTU/HR\*  
Min. Heat Release 7.2 MM BTU/HR  
Drawing No. 8500A-022

#### **SUR-LITE MODEL "MILLIKEN"**

Foot Print 137" x 108"  
w/ Fuel Filter 177" x 108"  
Stack Height 25'  
Waste Gas Pressure 12" WC or greater  
Weight 40,000lbs Castable/29,000lbs Ceramic  
Max. Heat Release 60 MM BTU/HR\*  
Min. Heat Release 12 MM BTU/HR  
Drawing No. 8500A-017

\*\*\* Heat release equals:

- Flow rate in standard cubic feet
- Times the waste gas methane fraction
- Times 1000 British Thermal Units per cubic foot
- Times 60 minutes per hour

or

$$\text{Heat Release (BTU/HR)} = \text{Flow (SCFM)} \times \text{Methane fraction} \times 1000 \text{ BTU/FT}^3 \times 60 \text{ minutes/hr}$$

Following is a partial list of options:

- |                               |                        |
|-------------------------------|------------------------|
| • Auxiliary Fuel Manifold     | • Strip Chart Recorder |
| • Ladder and/or Platform      | • Seismic Calculations |
| • Blowers                     | • Flow Measurement     |
| • NEMA 7 Enclosures           | • Fuel Filters         |
| • Uninterrupted Power Supply  | • Turndown 20 to 1     |
| • Condensate Injection System |                        |

Sur-Lite Corporation has been building Condensate Injection Systems since 1962. The systems were designed to destroy, oily water and liquids from chemical processes. Generally, Sur-Lite's Condensate Injection System, which can be mounted on all Sur-Lite Flares will include.

- Sur-Lite Liquid Waste Nozzle designed to inject a quantity of condensate into the existing flare.
- A small combustion air fan.
- A landfill gas fuel train.
- An atomizing air train.
- A condensate injection pump.
- An air compressor.
- A NEMA 4 control panel.
- Skid with a footprint of approximately 8' x 10' and a weight of 10,000 lbs

The system runs on 440 V, 3 phase power and will require connection to your landfill gas system and your condensate collection system. Generally, the nozzle will require the use of waste gas to assure maximum destruction of all organics entrained in the liquid stream. The Sur-Lite injection nozzle can handle particulate sizes up to 1/8" in diameter.

For specific information on the Sur-Lite Condensate Injection Nozzle, please ask for Sur-Lite brochure LW-91-6000-01.

Variation in Methane, Carbon Dioxide, and other constituents affect emissions, significantly. Assuming 50% Methane - 40% Carbon Dioxide, Sur-Lite will guarantee emissions as low as:

.06 pounds per million BTU Nox  
.20 pounds per million BTU CO  
(During the warranty period.)

Although a higher number is obtainable, we generally designed for and achieve 99% Destruction and Removal Efficiency.

Sur-Lite Corporation has designed the Sur-Lite Flaring System for all weather outdoor use. Skin temperatures and safety venting features are designed in compliance with Occupation Safety and Health Administration Standards.

Typically the Sur-Lite design is ideal for the following applications:

- \* Vapor Transfer Systems \*
- \* Digester Gas Destruction \*
- \* Landfill Gas Control Systems \*
- \* Soil Vapor Recovery Systems \*
- \* Stripping Column Vent Gas Destruction \*
- \* Tank Cleaning Vent Gas Destruction \*
- \* Temporary Oxidizer Service \*

**INFORMATION NEEDED FOR THE SUR-LITE CONDENSATE INJECTION SYSTEMS:**

Standard Sur-Lite Condensate Injection System are supplied to handle volumes from 20 GPH to 300 GPH. Custom-designed burners can be supplied to fit applications other than standard.

Flow rate of material of GALLONS PER HOUR \_\_\_\_\_

Analysis of the material being delivered to the burner:

Gravity, A.P.I. @ 60°F. \_\_\_\_\_

Specific Gravity @ 60°F. \_\_\_\_\_

Flash Point TCC, °F. \_\_\_\_\_

Pour Point, °F. \_\_\_\_\_

Sulfur, % \_\_\_\_\_

% of water in the emulsion delivered to the nozzle \_\_\_\_\_

BTU/gallon of the material to be burned \_\_\_\_\_

Percent of ash \_\_\_\_\_

Metals present in the material:

(1) Vanadium, % \_\_\_\_\_

(2) Nickel, % \_\_\_\_\_

(3) Copper, % \_\_\_\_\_

(4) Sodium, % \_\_\_\_\_

Size of the combustion chamber into which the burner will be firing: \_\_\_\_\_

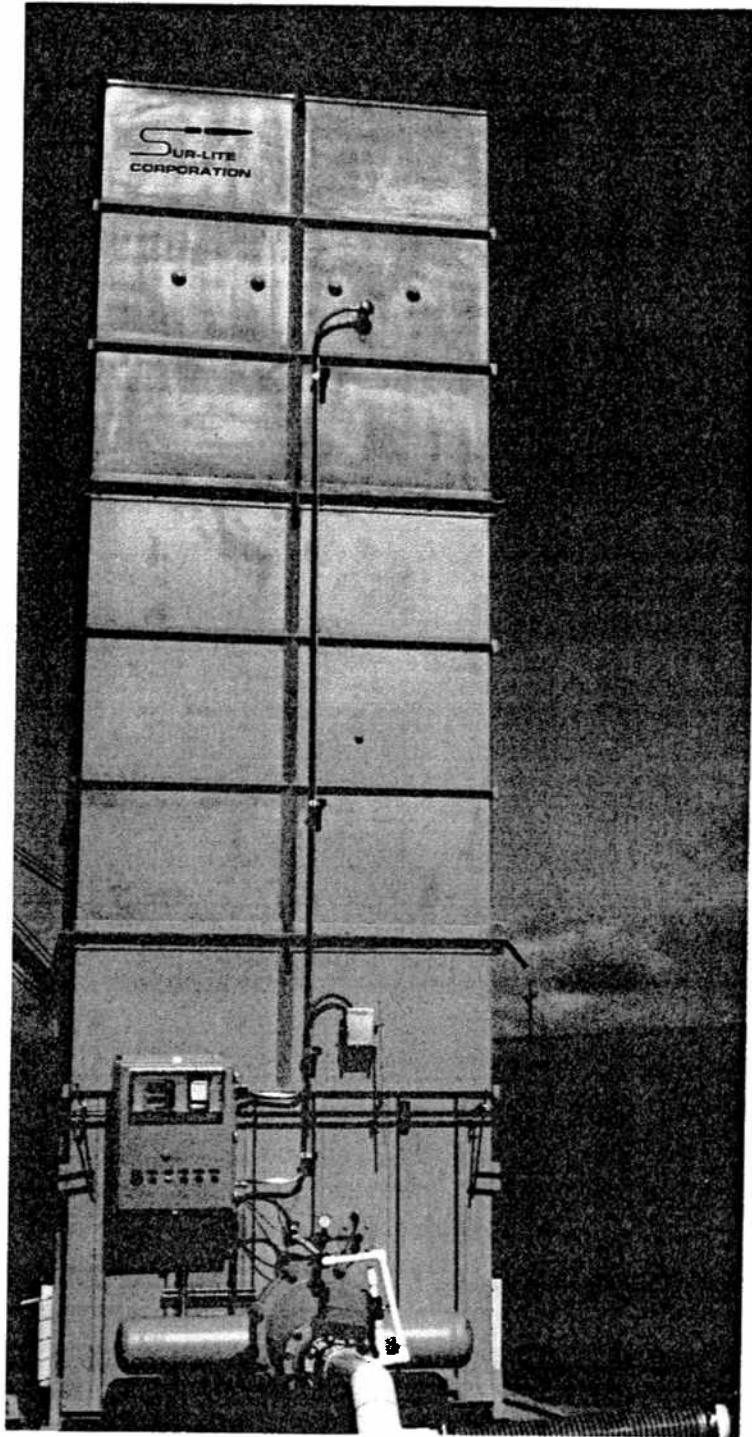
Steam pressure available for atomizing purposes (it is desirable to have steam at 150 psig) \_\_\_\_\_

Air pressure available for atomizing purposes- if it is to be used instead of steam (it is desirable to have air at 100 psig) \_\_\_\_\_

For drawings and further information, please contact:

Sur-Lite Corporation  
8124 Allport Avenue  
Santa Fe Springs, California 90670  
Phone No. (310) 693-0796  
(800) 432-8818  
Fax No. (310) 693-7564

# **SUR-LITE GROUND FLARE**



*Sur-Lite Ground Flare in a landfill gas destruction application.*

- Controls gas migration and surface emissions from landfills
- Also used for effective destruction of digester and refinery gas
- Enclosed Flame Design
- Automatic Operation
- High Destruction Removal Efficiency (DRE)
- Meets EPA, state and local regulatory standards, including California

# **SUR-LITE GROUND FLARE**

Twenty-five years of proven experience in waste gas and fume incineration has enabled Sur-Lite to become a leading manufacturer of ground flares for landfill, digester, and refinery gas.

The turbulence generated in SUR-LITE'S FLAME BATH® BURNER assures effective destruction of low BTU gas.

The modular design of the FLAME BATH® BURNER permits flexibility in meeting specific project requirements.

Standard ground flare sizes are available from 30 to 4000 SCFM of waste gas (approximately 4 to 140 million BTU/HR). Smaller and larger sizes as well as multiple units can be supplied.

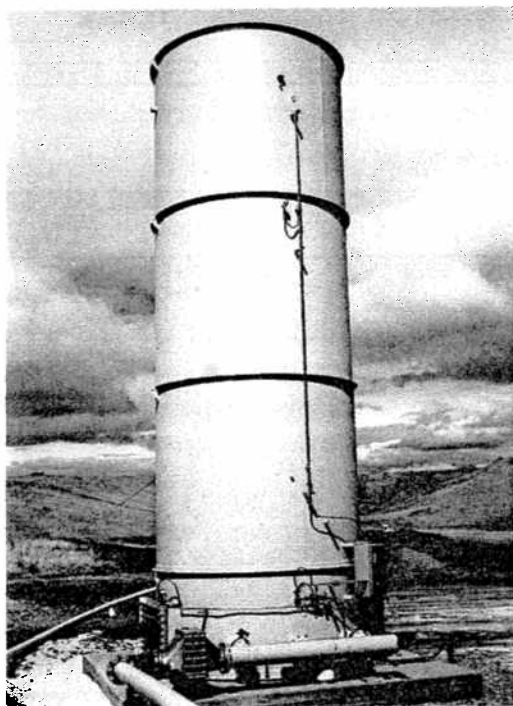
SUR-LITE ground flares are fully modulating with 5:1 turndown ratio.

Centralized control cabinet includes electronic temperature control system and provides automatic shutdown and restart functions.

SUR-LITE products have a reputation for reliability and long life. Our engineers, trained service technicians, and parts department are equipped for immediate response.

SUR-LITE'S experienced staff can assist with the regulatory permitting procedure.

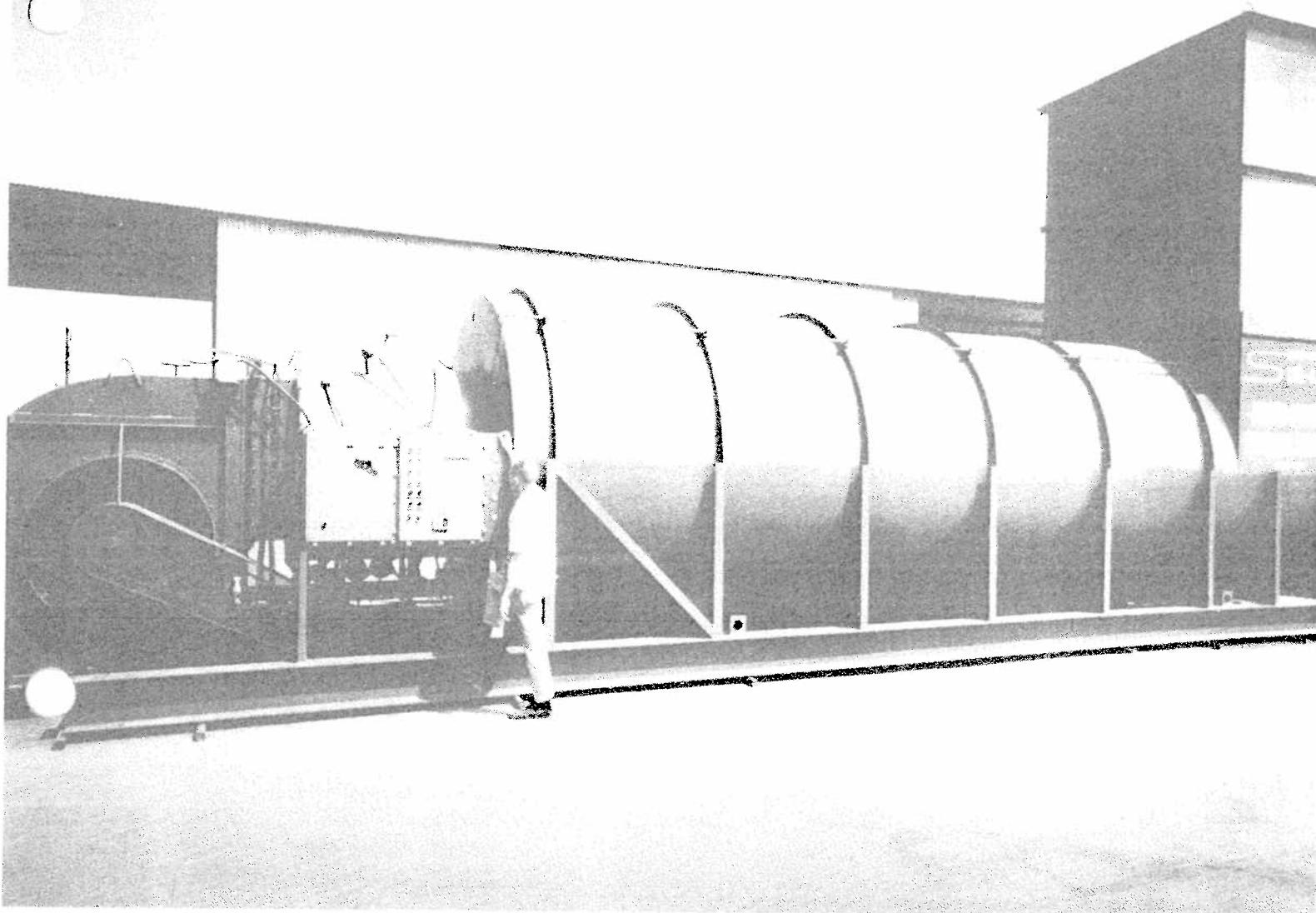
SUR-LITE also manufactures combustion systems for application to heaters, boilers, and other process equipment.



**UR-LITE CORPORATION**

8124 ALLPORT AVENUE  
SANTA FE SPRINGS, CALIFORNIA 90670  
(213) 693-0796 • (213) 698-9432  
FAX (213) 693-7564

AN ENGINEERED PACKAGE  
TO FIT YOUR NEEDS



# **POLLUTION CONTROL**

**By**



**SUR-LITE CORPORATION**

(310) 693-0796

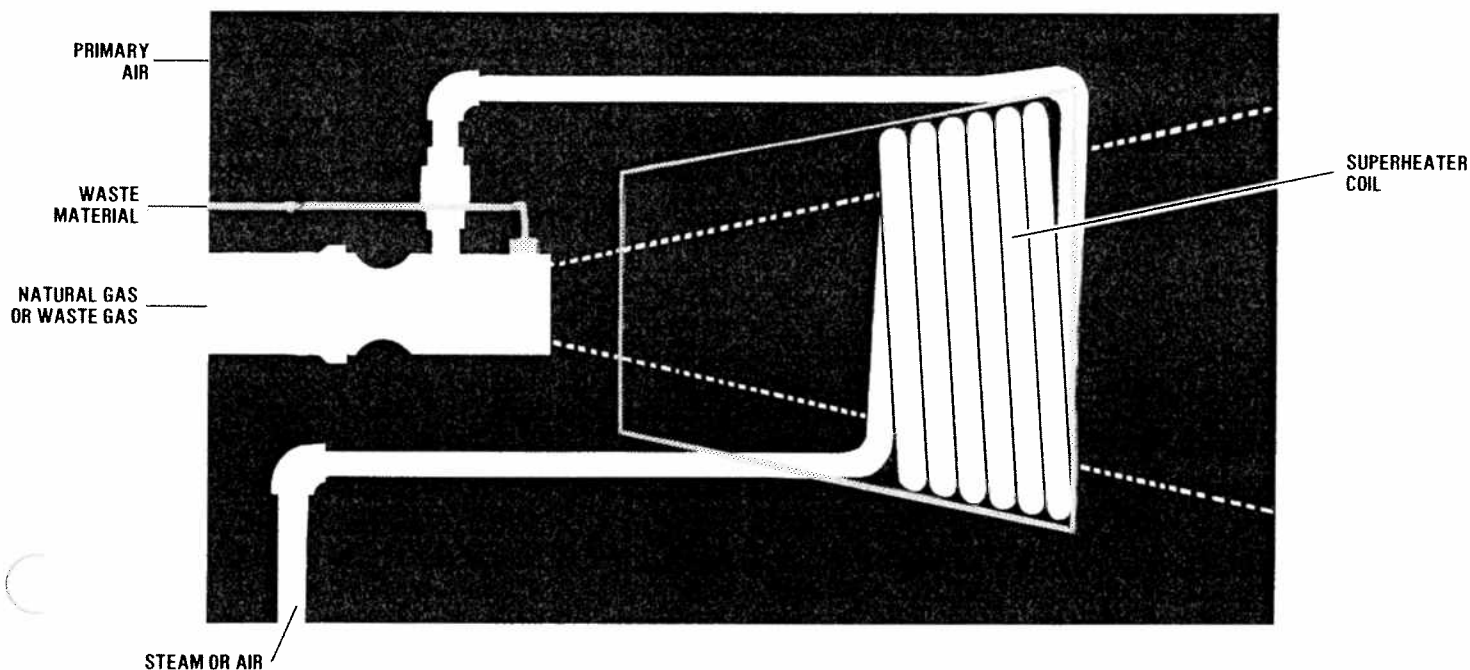
LW-91-6000-01

8130 Allport Avenue • Santa Fe Springs, California 90670

# The Sur-Lite Liquid Waste Burner

patented steam atomizing burner with no moving parts. The atomizing steam or air in the **Sur-Lite** process is superheated by the radiant heat from the flame. The superheated steam or air is then used to vaporize the material to be burned. Because of the unique design of the **Sur-Lite** Liquid Waste

Burner it is possible to burn many types of liquid waste material previously considered impossible to incinerate, including waste liquid emulsions containing up to 50% noncombustibles. (We will do feasibility tests on incineration of your liquid waste at our plant for a nominal charge.)



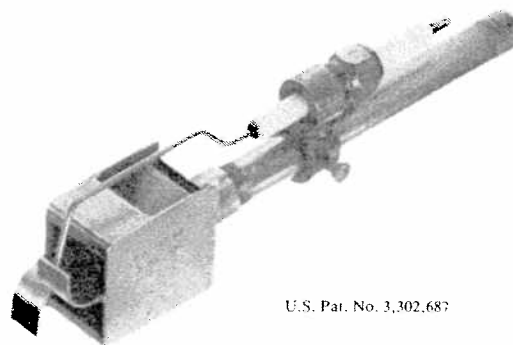
## Operation

Operation of the **Sur-Lite** steam atomizing burner is a simple application of thermal balance between a fuel system and a combustion zone, with superheated steam or air as the energy transfer media.

Because of its design, the **Sur-Lite** Liquid Waste Burner takes advantage of normal radiation losses through furnace fronts and uses this energy to vaporize the material being burned. Atomizing steam or air used in the **Sur-Lite** process is superheated by the radiant heat of the flame. Under normal operating conditions, the pressure of the atomizing steam or air supplied to the **Sur-Lite** Burner should not be less than 150 PSIG for steam or 100 PSIG for air. The flame length is governed by the air or steam pressure to the burner superheater. Normal operating range of the **Sur-Lite** Burner super-heating system will be between 800°F and 1200°F. Higher operating ranges are available where required by the nature of the waste material to be burned. The pressure at which the steam or air enters the burner superheater is defined by the operating conditions.

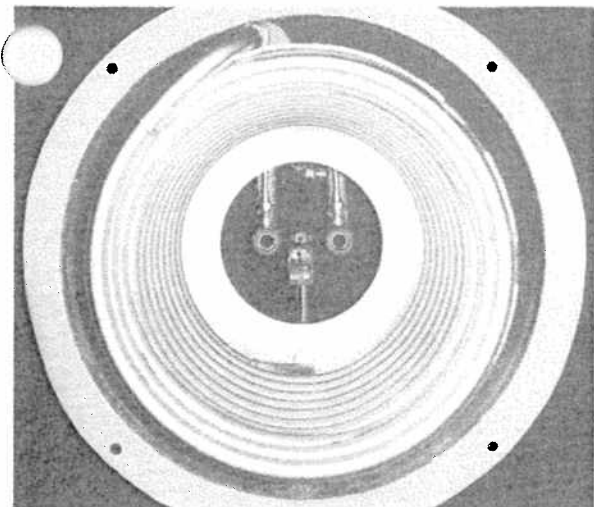
Primary air for combustion is induced through the center of the nozzle and is thoroughly mixed with the waste liquid and superheated steam or air. This same action occurs while burning natural gas through the combination burner nozzle.

Primary air for combustion is controlled by the **Sur-Lite** nozzle making it possible to reduce the excess air required. The waste liquid or gas being consumed is preheated and vaporized before it reaches the combustion zone of the burner. The ring at the nozzle outlet is in a negative pressure zone during the burner operation, making it possible to operate with relatively low supply pressures, even with heavy viscous materials.

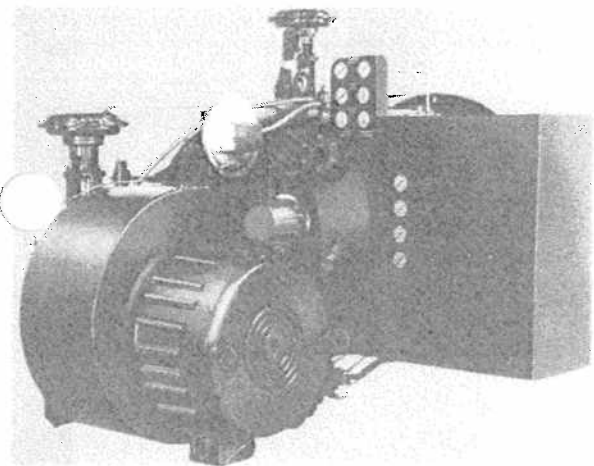


A patented **Sur-Lite** Pilot Light Assembly is used on all **Sur-Lite** Burner Systems. Positive ignition in draft velocities in excess of 4000 ft. per minute is assured. It will maintain stable flame under extreme velocity variations. Operates on high-pressure industrial gas supply systems, either natural or LPG.

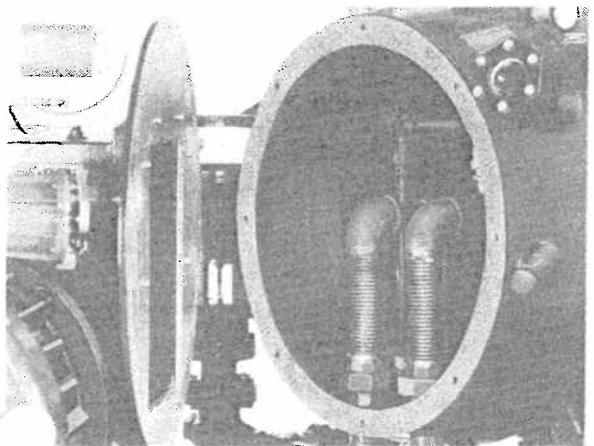
## Gas-Liquid Combination



Superheated section of the Sur-Lite Burner, showing the Sur-Lite Pilot Light assembly and nozzles as seen from the combustion zone of the burner. Assures guaranteed performance, burning without smoke, soot, or coking. Complete combustion achieved from atomization with superheated steam or super heated air.

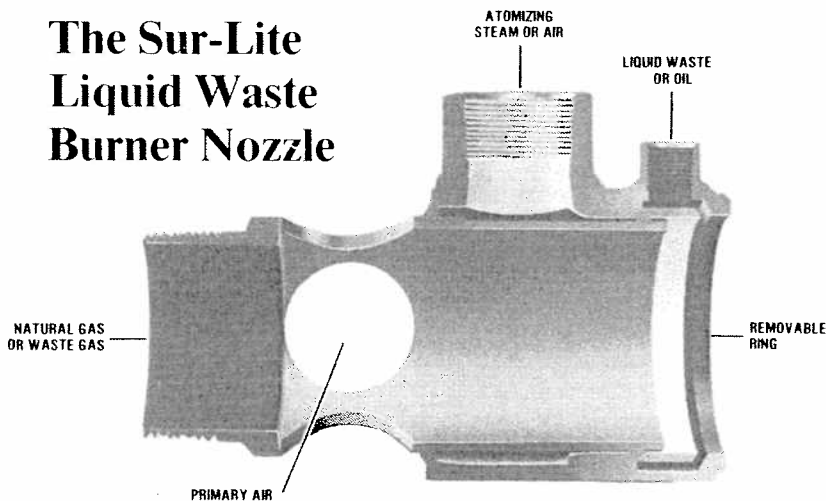


Sur-Lite Burner, dual-fuel type, showing the control panel, view port, U.V. scanner, and centrifugal forced draft fan. Where forced draft is required, a centrifugal or axial flow fan system can be supplied.



Sur-Lite combination burner assembly, showing the gas supply lines to the nozzles and the external gas header connection. Forced draft fan, hinge-mounted for easy access to all areas of the burner for routine inspection and maintenance.

## The Sur-Lite Liquid Waste Burner Nozzle



U.S. Patent No. 3,326,472

## The Sur-Lite Liquid Waste Burner Assembly

**The standard burner assembly with automatic controls includes:**

Raintight control box.

U.V. Scanner and programmer.

Gas pilot light assembly.

Spark ignition system.

Start-stop switches.

Power on-off control switch.

Selector switch.\*

Indicator lights:

- (1) Power on
- (2) Liquid fire on
- (3) Gas fire on\*
- (4) Flame failure

Control relay system, contactor, terminal strip for external limits, etc., prewired in a control panel box.

Damper and damper control system.\*

Burner housing with mounting flange to meet customer requirements.

Superheater coil and face plate assembly fabricated of stainless steel.

Combination nozzle assembly\* (stainless steel, with removable ring).

Liquid control solenoid valve assembly.

Atomizing air or steam control solenoid valve assembly.

Automatic air or steam purge system on feed line and nozzle.

Hinged burner (for easy maintenance)\*

Pilot gas control solenoid valve assembly.

Main gas supply control solenoid valve assembly.\*

Pressure gauges (panel mounted).

*\*When applicable*

# Information Needed for Sur-Lite Liquid Waste Burner Systems

Standard **Sur-Lite** Liquid Waste Burners are supplied to handle volumes from 20 GPH to 1500 GPH. Custom-designed burners can be supplied to fit applications other than standard.

Flow rate of material in terms of GALLONS PER HOUR. \_\_\_\_\_

Analysis of the materials being delivered to the burner:

Gravity, expressed in terms of A.P.I. @ 60°F. \_\_\_\_\_

Specific Gravity @ 60°F. \_\_\_\_\_

Flash Point TCC, °F. \_\_\_\_\_

Fire Point, °F. \_\_\_\_\_

Pour Point, °F. \_\_\_\_\_

Sulfur, % \_\_\_\_\_

Percent of water in the emulsion delivered to the nozzle. \_\_\_\_\_

BTU/gallon of the material to be burned. \_\_\_\_\_

Viscosity, in terms of SSU, at each of the following temperature levels:

80°F. \_\_\_\_\_

120°F. \_\_\_\_\_

180°F. \_\_\_\_\_

210°F. \_\_\_\_\_

250°F. \_\_\_\_\_

Percent of carbon residue. \_\_\_\_\_

Percent of ash. \_\_\_\_\_

Metals present in the material:

(1) Vanadium, % \_\_\_\_\_

(2) Nickel, % \_\_\_\_\_

(3) Copper, % \_\_\_\_\_

(4) Sodium, % \_\_\_\_\_

Size of the combustion chamber into which the burner will be firing. \_\_\_\_\_ If no combustion chamber is to be used, describe the system in detail. \_\_\_\_\_

Steam pressure available for atomizing purposes (it is desirable to have steam at 150 PSIG) \_\_\_\_\_

Air pressure available for atomizing purposes—if it is to be used instead of steam (it is desirable to have air at 100 PSIG) \_\_\_\_\_

Volume of air which is available for combustion purposes expressed in terms of cubic feet per minute. \_\_\_\_\_

Is the system natural, forced or induced draft? \_\_\_\_\_

*Steam required for atomizing is 4# per gallon of liquid waste to be burned, for start-up conditions. For regular operation, approximately 2.8# of steam per gallon of liquid waste.*

*For every gallon of liquid waste material to be burned, 1.25 cfm of atomizing air is required.*

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Phone \_\_\_\_\_ Zip \_\_\_\_\_

*Test facilities are available at our plant to determine feasibility of incineration of your liquid waste, and are at your disposal. A minimal charge is made for the use of these facilities.*

(310) 693-0796

**SUR-LITE CORPORATION**

8130 Allport Avenue • Santa Fe Springs, California 90670



**SCS FIELD SERVICES, INC.**

August 31, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

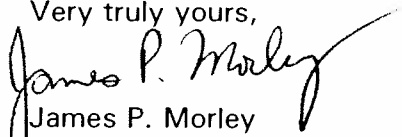
Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of July 1 through 31, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected at any of the monitoring wells tested. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 6,705 gallons as measured at the flare inlet flow meter.
- On July 28, 1998, SCS-FS repaired Extraction Well No. 18.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

  
James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003



**SCS FIELD SERVICES, INC.**

August 31, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of July 1 through 31, 1998.

Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, no methane gas was detected at any of the LFG monitoring wells tested. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells indicated that a significant number of wells exhibited an overpull condition. This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The temperatures ranged from 78 to 132 degrees Fahrenheit. The result of this survey indicated subsurface temperatures are in the normal to high range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, no unscheduled shut-downs occurred.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1550 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 6,705 gallons as measured by the flare inlet flow meter.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

On July 28, 1998, SCS-FS repaired Extraction Well No. 18.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

Mr. George Cosby  
August 31, 1998  
Page Five

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. The next quarterly site observation is scheduled to be conducted in October 1998.

#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

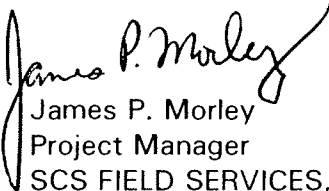
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician



James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	07/07/98	ND	20.4	-0.01	
	07/14/98	ND	20.4	-0.01	
	07/21/98	ND	20.2	ND	
	07/28/98	ND	20.4	ND	
1A	07/07/98	ND	18.9	-0.01	
	07/14/98	ND	18.6	-0.01	
	07/21/98	ND	18.7	-0.02	
	07/28/98	ND	18.3	-0.01	
2	07/07/98	ND	20.1	0.01	
	07/14/98	ND	19.8	ND	
	07/21/98	ND	19.8	ND	
	07/28/98	ND	19.7	ND	
2A	07/07/98	ND	20.5	ND	
	07/14/98	ND	19.2	ND	
	07/21/98	ND	20.1	ND	
	07/28/98	ND	18.2	ND	
3B	07/07/98	ND	18.8	-0.01	
	07/14/98	ND	20.2	-0.02	
	07/21/98	ND	20.0	ND	
	07/28/98	ND	20.1	ND	
4	07/07/98	ND	20.4	0.01	
	07/14/98	ND	20.3	ND	
	07/21/98	ND	19.8	-0.18	
	07/28/98	ND	20.1	0.02	
4A	07/07/98	ND	20.1	ND	
	07/14/98	ND	20.2	ND	
	07/21/98	ND	19.7	ND	
	07/28/98	ND	19.1	ND	
5	07/07/98	ND	20.5	0.01	
	07/14/98	ND	20.1	-0.06	
	07/21/98	ND	20.1	-0.06	
	07/28/98	ND	18.6	-0.01	
5A	07/07/98	ND	19.4	0.01	
	07/14/98	ND	19.7	ND	
	07/21/98	ND	19.5	ND	
	07/28/98	ND	20.1	-0.03	
6B	07/07/98	ND	18.8	-0.01	
	07/14/98	ND	18.7	-0.07	
	07/21/98	ND	18.8	-0.10	
	07/28/98	ND	18.6	-0.04	
6C	07/07/98	ND	17.2	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C	07/14/98	ND	17.3	0.01	
	07/21/98	ND	17.0	ND	
	07/28/98	ND	16.8	ND	
6D	07/07/98	ND	19.8	-0.02	
	07/14/98	ND	19.7	-0.06	
	07/21/98	ND	19.7	-0.06	
	07/28/98	ND	18.8	-0.03	
7	07/07/98	ND	19.6	0.01	
	07/14/98	ND	20.3	0.01	PARTIALLY PULLED
	07/21/98	ND	20.2	ND	PARTIALLY PULLED
	07/28/98	ND	20.6	ND	
7A	07/07/98	ND	20.5	-0.04	
	07/14/98	ND	20.1	-0.01	
	07/21/98	ND	20.3	ND	
	07/28/98	ND	20.4	ND	
8A	07/07/98	ND	18.3	0.01	
	07/14/98	ND	18.5	-0.03	
	07/21/98	ND	18.4	-0.04	
	07/28/98	ND	18.0	ND	
9	07/07/98	ND	20.4	-0.07	
	07/14/98	ND	20.1	-0.06	
	07/21/98	ND	20.2	-0.06	
	07/28/98	ND	13.0	-0.02	
10	07/07/98	ND	17.9	-0.01	
	07/14/98	ND	19.6	ND	
	07/21/98	ND	20.2	ND	
	07/28/98	ND	19.8	0.06	
10A	07/07/98	ND	20.1	ND	
	07/14/98	ND	19.9	0.12	
	07/21/98	ND	19.8	ND	
	07/28/98	ND	20.3	ND	
11B	07/07/98	ND	20.7	-0.01	
	07/14/98	ND	20.3	-0.07	
	07/21/98	ND	20.4	-0.08	
	07/28/98	ND	20.6	-0.06	
12B	07/07/98	ND	20.6	ND	
	07/14/98	ND	20.3	-0.06	
	07/21/98	ND	20.2	-0.03	
	07/28/98	ND	20.6	ND	
13B	07/07/98	ND	20.6	ND	
	07/14/98	ND	20.4	-0.03	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
13B	07/21/98	ND	20.2	-0.02	
	07/28/98	ND	20.6	-0.01	
13D	07/07/98	ND	20.6	ND	
	07/14/98	ND	20.2	-0.02	
	07/21/98	ND	20.3	-0.02	
	07/28/98	ND	20.6	-0.02	
13C	07/07/98	ND	20.7	-0.02	
	07/14/98	ND	20.4	-0.02	
	07/21/98	ND	20.2	-0.03	
	07/28/98	ND	20.6	-0.02	
13X	07/07/98	ND	20.5	ND	
	07/14/98	ND	20.4	ND	
	07/21/98	ND	20.4	ND	
	07/28/98	ND	20.6	ND	
14B	07/07/98	ND	20.3	ND	
	07/14/98	ND	20.7	ND	
	07/21/98	ND	20.4	0.5	PARTIALLY PLUGGED
	07/28/98	ND	20.7	0.94	
14C	07/07/98	ND	20.6	0.28	
	07/14/98	ND	20.2	ND	
	07/21/98	ND	19.8	ND	
	07/28/98	ND	20.5	ND	
15A	07/07/98	ND	20.5	0.50	
	07/14/98	ND	20.2	ND	
	07/21/98	ND	20.4	4.00	PARTIALLY PLUGGED
	07/28/98	ND	19.8	-0.01	
16A	07/07/98	ND	16.6	-0.03	
	07/14/98	ND	16.6	-0.07	
	07/21/98	ND	17.1	-0.07	
	07/28/98	ND	15.6	-0.05	
16X	07/07/98	ND	20.3	ND	
	07/14/98	ND	20.0	ND	
	07/21/98	ND	19.9	ND	
	07/28/98	ND	20.0	ND	
17A	07/07/98	ND	14.8	ND	
	07/14/98	ND	15.1	-0.02	
	07/21/98	ND	15.7	-0.02	
	07/28/98	ND	13.0	-0.01	
18B	07/07/98	ND	14.0	ND	
	07/14/98	ND	17.8	ND	
	07/21/98	ND	17.2	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
18B	07/28/98	ND	14.3	ND	
19	07/07/98	ND	19.8	ND	
	07/14/98	ND	18.6	ND	
	07/21/98	ND	19.0	ND	
	07/28/98	ND	18.8	0.01	
20	07/07/98	ND	18.2	ND	
	07/14/98	ND	17.6	0.01	
	07/21/98	ND	17.6	-0.01	
	07/28/98	ND	17.6	-0.01	
20A	07/07/98	ND	18.3	ND	
	07/14/98	ND	17.3	ND	
	07/21/98	ND	17.0	-0.02	
	07/28/98	ND	16.8	ND	
22	07/07/98	ND	18.7	ND	
	07/14/98	ND	18.3	ND	
	07/21/98	ND	18.2	ND	
	07/28/98	ND	18.1	-0.01	
22A	07/07/98	ND	18.4	ND	
	07/14/98	ND	17.6	ND	
	07/21/98	ND	18.6	ND	
	07/28/98	ND	18.9	-0.02	
23	07/07/98	ND	20.4	1.3	
	07/14/98	ND	19.9	0.08	
	07/21/98	ND	19.4	1.00	
	07/28/98	ND	20.2	0.09	PARTAILLY PLUGGED
24	07/07/98	ND	20.5	ND	
	07/14/98	ND	20.1	-0.01	
	07/21/98	ND	20.1	-0.03	
	07/28/98	ND	20.5	-0.01	
24A	07/07/98	ND	20.4	ND	
	07/14/98	ND	19.7	ND	
	07/21/98	ND	20.1	-0.02	
	07/28/98	ND	20.5	-0.02	
25	07/07/98	ND	20.3	ND	
	07/14/98	ND	20.2	-0.01	
	07/21/98	ND	20.0	ND	
	07/28/98	ND	20.6	-0.03	
25A	07/07/98	ND	19.7	-0.01	
	07/14/98	ND	19.4	ND	
	07/21/98	ND	19.2	-0.02	
	07/28/98	ND	20.7	-0.03	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26	07/07/98	ND	20.4	ND	
	07/14/98	ND	19.9	0.01	
	07/21/98	ND	20.1	-0.02	
	07/28/98	ND	20.7	-0.03	
26A	07/07/98	ND	20.3	ND	
	07/14/98	ND	19.8	ND	
	07/21/98	ND	20.4	-0.01	
	07/28/98	ND	20.6	-0.01	
26B	07/07/98	ND	19.9	0.01	
	07/14/98	ND	19.5	0.01	
	07/21/98	ND	19.7	ND	
	07/28/98	ND	20.6	ND	
27	07/07/98	ND	20.1	ND	
	07/14/98	ND	20.1	ND	
	07/21/98	ND	19.8	ND	
	07/28/98	ND	20.5	ND	
27A	07/07/98	ND	19.2	ND	
	07/14/98	ND	19.1	ND	
	07/21/98	ND	18.7	ND	
	07/28/98	ND	19.3	-0.01	
28	07/07/98	ND	20.4	ND	
	07/14/98	ND	20.1	ND	
	07/21/98	ND	20.2	ND	
	07/28/98	ND	20.5	ND	
30A	07/07/98	ND	20.4	2.4	
	07/14/98	ND	20.1	0.08	PARTIALLY PULLED
	07/21/98	ND	19.7	0.08	
	07/28/98	ND	20.5	0.13	
31	07/07/98	ND	20.4	3.1	
	07/14/98	ND	20.1	1.50	
	07/21/98	ND	19.8	0.75	PARTIALLY PLUGGED
	07/28/98	ND	20.5	0.31	
31A	07/07/98	ND	19.9	1.0	
	07/14/98	ND	18.1	0.64	
	07/21/98	ND	17.9	0.04	
	07/28/98	ND	19.8	ND	
32	07/07/98	ND	20.3	0.01	
	07/14/98	ND	19.8	ND	
	07/21/98	ND	19.8	ND	
	07/28/98	ND	20.1	ND	
32A	07/07/98	ND	20.5	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	07/14/98	ND	19.8	ND	
	07/21/98	ND	20.2	ND	
	07/28/98	ND	20.2	ND	
33	07/07/98	ND	19.2	ND	
	07/14/98	ND	19.2	ND	
	07/21/98	ND	19.6	0.01	
	07/28/98	ND	19.9	ND	
34	07/07/98	ND	19.9	0.01	
	07/14/98	ND	18.2	ND	
	07/21/98	ND	18.2	ND	
	07/28/98	ND	16.2	ND	
35	07/07/98	ND	20.6	ND	
	07/14/98	ND	20.0	ND	
	07/21/98	ND	20.3	ND	
	07/28/98	ND	20.4	ND	
36B	07/07/98	ND	18.1	0.02	
	07/14/98	ND	18.2	ND	
	07/21/98	ND	18.4	ND	
	07/28/98	ND	20.3	ND	
37	07/07/98	ND	20.6	ND	
	07/14/98	ND	20.3	ND	
	07/21/98	ND	20.1	ND	
	07/28/98	ND	20.4	-0.01	
38	07/07/98	ND	20.4	ND	
	07/14/98	NT	NT	NT	DAMAGED
	07/21/98	ND	19.4	0.01	
	07/28/98	ND	20.2	ND	
39	07/07/98	ND	20.6	0.21	
	07/14/98	ND	20.2	0.02	
	07/21/98	ND	19.8	1.1 TO 0	
	07/28/98	ND	20.2	ND	
40	07/07/98	ND	20.4	0.01	
	07/14/98	ND	19.3	ND	
	07/21/98	ND	20.1	ND	
	07/28/98	ND	20.3	ND	
41	07/07/98	ND	20.5	ND	
	07/14/98	ND	19.1	ND	
	07/21/98	ND	19.2	ND	
	07/28/98	ND	19.2	ND	
42	07/07/98	ND	20.2	ND	
	07/14/98	ND	14.3	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
42	07/21/98	ND	17.1	0.01	
	07/28/98	ND	14.3	ND	
43	07/07/98	ND	18.9	ND	
	07/14/98	ND	15.2	-0.01	
	07/21/98	ND	15.1	-0.02	
	07/28/98	ND	13.1	-0.02	
45	07/07/98	ND	20.0	ND	
	07/14/98	ND	19.7	ND	
	07/21/98	ND	19.8	-0.03	
	07/28/98	ND	19.4	-0.03	
46	07/07/98	ND	20.2	0.01	
	07/14/98	ND	20.1	ND	
	07/21/98	ND	20.1	0.01	
	07/28/98	ND	19.8	ND	
1B'	07/07/98	ND	20.5	ND	
	07/14/98	ND	20.3	-0.06	
	07/21/98	ND	20.2	-0.03	
	07/28/98	ND	20.7	-0.05	
1C'	07/07/98	ND	20.5	ND	
	07/14/98	ND	20.3	-0.02	
	07/21/98	ND	20.1	-0.01	
	07/28/98	ND	20.6	-0.03	
2B'	07/07/98	ND	20.6	-0.01	
	07/14/98	ND	20.3	-0.02	
	07/21/98	ND	20.2	-0.01	
	07/28/98	ND	20.4	-0.02	
2C'	07/07/98	ND	20.5	-0.01	
	07/14/98	ND	20.4	-0.04	
	07/21/98	ND	20.3	-0.01	
	07/28/98	ND	20.6	-0.02	
3B'	07/07/98	ND	20.6	-0.01	
	07/14/98	ND	20.3	ND	
	07/21/98	ND	20.2	ND	
	07/28/98	ND	20.7	-0.02	
3C'	07/07/98	ND	20.6	-0.05	
	07/14/98	ND	20.4	-0.08	
	07/21/98	ND	20.3	-0.11	
	07/28/98	ND	20.6	-0.12	
4B'	07/07/98	ND	19.9	ND	
	07/14/98	ND	20.4	-0.04	
	07/21/98	ND	20.2	-0.04	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
4B'	07/28/98	ND	20.5	-0.04	
4C'	07/07/98	ND	20.3	ND	
	07/14/98	ND	20.2	-0.02	
	07/21/98	ND	20.2	-0.03	
	07/28/98	ND	20.6	-0.01	
5B'	07/07/98	ND	19.8	ND	
	07/14/98	ND	20.2	-0.07	
	07/21/98	ND	20.3	-0.08	
	07/28/98	ND	20.1	-0.01	
5C'	07/07/98	ND	20.5	ND	
	07/14/98	ND	20.3	-0.05	
	07/21/98	ND	20.4	-0.05	
	07/28/98	ND	20.6	ND	
6B'	07/07/98	ND	20.4	ND	
	07/14/98	ND	20.3	ND	
	07/21/98	ND	20.3	ND	
	07/28/98	ND	20.3	-0.01	
6C'	07/07/98	ND	20.2	ND	
	07/14/98	ND	20.4	ND	
	07/21/98	ND	20.4	ND	
	07/28/98	ND	20.6	ND	
7B'	07/07/98	ND	19.5	ND	
	07/14/98	ND	19.1	ND	
	07/21/98	ND	19.1	-0.01	
	07/28/98	ND	18.4	ND	
7C'	07/07/98	ND	20.6	ND	
	07/14/98	ND	18.9	ND	
	07/21/98	ND	20.3	ND	
	07/28/98	ND	20.5	ND	
8B'	07/07/98	ND	20.3	ND	
	07/14/98	ND	20.3	ND	
	07/21/98	ND	20.3	ND	
	07/28/98	ND	20.5	-0.01	
8C'	07/07/98	ND	20.6	ND	
	07/14/98	ND	19.7	ND	
	07/21/98	ND	20.4	-0.01	
	07/28/98	ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
P-1	07/07/98	ND	20.3	ND	-0.18	ND	96	0	
P-2	07/07/98	ND	19.6	0.4	-0.22	ND	97	0	
P-3	07/07/98	ND	20.3	ND	-0.22	ND	97	0	
P-4	07/07/98	ND	17.4	2.3	-0.22	ND	96	0	
P-5	07/07/98	ND	20.4	ND	-0.22	0.02	97	1	
P-6	07/07/98	ND	20.0	ND	-0.24	ND	96	0	
P-7	07/07/98	ND	18.1	1.8	-0.24	ND	97	0	
P-10	07/07/98	0.3	10.1	10.1	-0.28	-0.08	101	0	
P-11	07/07/98	ND	20.4	ND	-0.32	ND	98	0	
P-13	07/07/98	ND	20.3	ND	-0.32	ND	99	0	
P-14	07/07/98	ND	20.4	ND	-0.32	ND	97	0	
P-15	07/07/98	ND	20.3	ND	-0.32	ND	96	0	
P-16	07/07/98	ND	19.6	0.8	-0.32	ND	98	0	
P-17	07/07/98	ND	14.3	3.9	-0.32	-0.04	101	1	
P-18	07/07/98	ND	18.2	1.4	-0.32	ND	98	0	
P-19	07/07/98	ND	11.8	5.8	-0.32	-0.10	103		
P-20	07/07/98	ND	19.4	1.4	-0.32	ND	98	0	
P-21	07/07/98	ND	14.9	4.0	-0.32	-0.04	102	2	
P-22	07/07/98	ND	19.8	1.3	-0.32	ND	93	0	
P-23	07/07/98	5.3	9.8	11.1	-0.32	-0.22	116	20	
P-24	07/07/98	10.4	7.9	14.0	-0.32	-0.17	117	16	
P-25	07/07/98	8.5	10.6	11.4	-0.32	-0.23	118		
P-26	07/07/98	ND	19.9	1.1	-0.32	ND	96	0	
P-27	07/07/98	ND	19.8	0.8	-0.34	ND	98	0	
P-28	07/07/98	6.3	4.5	16.5	-0.30	-0.23	132	16	
P-29	07/07/98	3.0	12.8	8.0	-0.30	-0.23	111	20	
P-30	07/07/98	2.7	10.7	10.0	-0.30	-0.26	119	24	
P-31	07/07/98	ND	20.1	ND	-0.30	ND	94	0	
P-32	07/07/98	ND	20.0	ND	-0.28	ND	96	0	
P-33	07/07/98	ND	19.8	ND	-0.28	ND	98	0	
P-34	07/07/98	ND	20.3	ND	-0.28	ND	98	0	
P-35	07/07/98	3.5	12.1	8.9	-0.28	-0.18	108	12	
P-36	07/07/98	ND	13.3	6.9	-0.26	-0.06	99	4	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0.89003.00

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
P-37	07/07/98	ND	20.2	ND	-0.26	ND	98	0	
P-38	07/07/98	ND	20.1	ND	-0.24	ND	98	0	
P-39	07/07/98	ND	20.2	ND	-0.24	ND	97	0	
W-1	07/07/98	15.2	0.6	23.5	-1.0	-0.14	99	NT	
W-2	07/07/98	13.0	0.7	22.8	NT	-0.06	98	NT	
W-3	07/07/98	20.1	6.3	17.8	NT	-0.14	99	NT	
W-4	07/07/98	25.6	0.5	27.4	NT	-0.24	101	NT	
W-5	07/07/98	ND	17.6	5.9	NT	-0.54	98	NT	
W-6	07/07/98	12.1	0.7	22.6	-0.90	-0.13	98	NT	
W-7	07/07/98	31.6	4.8	24.8	-0.90	-0.84	102	NT	
W-8	07/07/98	17.4	1.0	25.2	NT	-0.08	98	NT	
W-9	07/07/98	16.2	0.4	23.7	NT	-0.15	97	NT	
W-10	07/07/98	13.8	0.6	23.3	-1.0	-0.14	98	NT	
W-11	07/07/98	14.4	0.4	22.9	NT	-0.17	97	NT	
W-12	07/07/98	10.8	6.2	13.4	NT	-0.04	96	NT	
W-13	07/07/98	13.4	1.6	21.4	NT	-0.08	96	NT	
W-14	07/07/98	NT	NT	NT	NT	NT	NT	NT	WELLHEAD PLUGGED
W-15	07/07/98	ND	ND	20.9	-1.2	NT	94	NT	
W-16	07/07/98	28.3	2.4	26.9	-1.3	-0.26	88	NT	
W-17	07/07/98	26.7	2.6	28.4	-1.3	-0.64	78	86	
W-18	07/07/98	22.2	0.2	27.4	-1.3	-0.18	82	48	
W-20	07/07/98	28.1	0.3	29.8	-1.3	-0.34	93	38	
W-21	07/07/98	31.5	0.3	32.5	-1.3	-1.2	101	36	
W-23	07/07/98	31.6	0.6	30.2	-32.0	-2.0	87	86	
W-24	07/07/98	24.7	2.3	26.1	-29.0	-3.50	91	48	
W-25	07/07/98	53.3	0.9	41.2	-29.0	-25.0	92	36	
W-26	07/07/98	4.1	9.3	11.8	-22.5	-0.48	93	38	
W-27	07/07/98	47.9	0.6	37.9	-32.0	-10.0	85	228	ADJ TO -10.8
W-28	07/07/98	NT	NT	NT	NT	NT	NT	NT	INACCESSIBLE
W-28A	07/07/98	37.4	0.6	34.6	-26.0	-0.53	103	12	ADJ TO -1.5
W-28B	07/07/98	23.1	0.4	28.5	-26.0	-0.04	94	19	ADJ TO -0.34
W-29	07/07/98	29.4	ND	31.4	-7.00	-6.00	92	NT	
W-29A	07/07/98	28.6	1.2	30.2	-1.7	-1.2	91	48	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0.89003.00

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
W-30	07/07/98	36.1	0.5	32.3	-26.0	-7.00	92	20	
W-31	07/07/98	47.8	1.3	38.6	-26.0	-21.5	89	36	
W-32	07/07/98	24.1	0.3	27.4	-26.0	-0.11	93	12	
W-33	07/07/98	32.4	4.2	26.2	-23.0	-21.0	94	143	
W-36	07/07/98	38.9	0.9	34.4	-22.5	-8.5	103	76	
W-37	07/07/98	20.7	8.6	18.1	-22.5	-6.50	92	124	
W-37A	07/07/98	20.3	1.1	26.1	-3.50	-0.22	108	20	
W-37B	07/07/98	14.1	4.9	18.6	-0.10	-0.10	98	NT	
W-38	07/07/98	28.9	0.8	29.7	-19.5	-2.1	82	NT	
W-38A	07/07/98	40.3	3.8	31.2	-8.00	-8.00	87	152	
W-38B	07/07/98	54.7	ND	41.3	-0.11	-0.11	85	29	
W-39	07/07/98	ND	20.2	ND	-2.03	-5.4	81	38	
W-40	07/07/98	ND	ND	20.8	-20.5	0.2	78	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							132		
Minimum:							0		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
07/07/98	26.7	1.7	-36.0	10.8	630	1553	2074
07/14/98	23.1	3.6	-35.0	11.2	650	1550	1693
07/21/98	23.1	4.6	-34.0	11.2	650	1550	1336
07/28/98	25.5	2.5	-34.0	11.8	660	1550	1602
=====	=====	=====	=====	=====	=====	=====	=====
Total:							6705
Minimum:						1550	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column



**SCS FIELD SERVICES, INC.**

September 30, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of August 1 through 31, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected at any of the monitoring wells tested. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 4,914 gallons as measured at the flare inlet flow meter.
- On August 13, 1998, SCS-FS responded to a callout. The condensate "Y" traps on the BFS tank were blocked. SCS-FS cleaned out the "Y" traps and restarted the system without.
- On August 25, 1998, SCS-FS sprayed and cleaned out the BFS stainless steel tank. SCS-FS also cleaned the condensate piping, hose lines, "Y" traps, and pumps.
- On August 26, 1998, SCS-FS repaired Condensate Trap No. S8. The saddle, flex hose, and lateral line were either replaced or repaired.

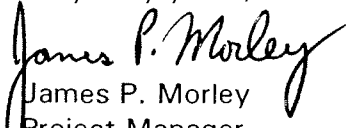


Mr. George Cosby  
September 30, 1998  
Page Two

- On August 27, 1998, SCS-FS excavated and repaired the sample ports for Well Nos. 14 and 15. SCS-FS also cleared vegetation from around all valve boxes protecting wellheads on the "dog leg" portion of the header system.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

  
James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

JM:vlf  
O:\COMMON\SCSFS\LBREPORT\0789003

**SCS FIELD SERVICES, INC.**

September 30, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of August 1 through 31, 1998.

Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames typically do not propagate through soils.



### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the second as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, 0.2 percent methane gas (well below the LEL) was detected at Monitoring Well 38. No methane gas was detected in any of the other monitoring probes tested. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second is a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells indicated that a significant number of wells exhibited an overpull condition. This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The temperatures ranged from 83 to 123 degrees Fahrenheit. The result of this survey indicated subsurface temperatures are in the normal to high range for anaerobic decomposition.

To determine flow rates at extraction wells, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, one unscheduled shut-down occurred.

- On August 13, 1998, SCS-FS responded to a call-out. The condensate "Y" traps on the BFS tank were blocked. SCS-FS cleaned out the "Y" traps and restarted the system without incident.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1545 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 4,914 gallons as measured by the flare inlet flow meter.

Additionally, on August 25, 1998, SCS-FS sprayed and cleaned out the BFS stainless steel tank. The condensate piping, hose lines, "Y" traps and pumps were also cleaned.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

Mr. George Cosby  
September 30, 1998  
Page Five

On August 26, 1998, SCS-FS repaired Condensate Trap No. S8. The saddle, flex hose, and lateral line were replaced or repaired. In addition, on August 27, 1998, SCS-FS excavated and repaired the sample parts for Well Nos. 14 and 15. Also, the vegetation around all the valve boxes protecting the wellheads on the "dog leg" portion of the header system was cleared.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. The next quarterly site observation is scheduled to be conducted in October 1998.

#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Mr. George Cosby  
September 30, 1998  
Page Six

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician



James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

JM:vlf  
O:\COMMON\SCSFS\LBREPORT\0789003

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	08/04/98	ND	20.4	ND	
	08/11/98	ND	20.2	ND	
	08/18/98	ND	20.7	-0.02	
	08/25/98	ND	20.6	ND	
1A	08/04/98	ND	18.4	-0.01	
	08/11/98	ND	19.3	ND	
	08/18/98	ND	19.1	ND	
	08/25/98	ND	18.4	ND	
2	08/04/98	ND	18.4	ND	
		ND	18.4	ND	
	08/11/98	ND	20.0	ND	
	08/18/98	ND	20.5	ND	
	08/25/98	ND	19.4	ND	
2A	08/04/98	ND	18.6	ND	
	08/11/98	ND	20.7	ND	
	08/18/98	ND	20.4	ND	
	08/25/98	ND	19.2	ND	
3B	08/04/98	ND	19.2	-0.01	
	08/11/98	ND	19.5	ND	
	08/18/98	ND	16.7	ND	
	08/25/98	ND	20.4	ND	
4	08/04/98	ND	19.1	0.01	
	08/11/98	ND	19.8	ND	
	08/18/98	ND	20.6	ND	
	08/25/98	ND	19.6	0.02	
4A	08/04/98	ND	18.6	0.02	
	08/11/98	ND	20.1	ND	
	08/18/98	ND	20.0	-0.02	
	08/25/98	ND	19.4	0.03	
5	08/04/98	ND	19.2	-0.02	
	08/11/98	ND	20.1	-0.05	
	08/18/98	ND	20.8	-0.02	
	08/25/98	ND	20.6	ND	
5A	08/04/98	ND	19.1	-0.01	
	08/11/98	ND	20.7	-0.01	
	08/18/98	ND	20.7	-0.02	
	08/25/98	ND	19.8	ND	
6B	08/04/98	ND	18.5	0.02	
	08/11/98	ND	19.4	-0.08	
	08/18/98	ND	20.0	ND	
	08/25/98	ND	18.8	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C	08/04/98	ND	16.8	ND	
	08/11/98	ND	17.7	ND	
	08/18/98	ND	17.5	0.01	
	08/25/98	ND	16.8	-0.01	
6D	08/04/98	ND	18.3	-0.02	
	08/11/98	ND	19.8	-0.04	
	08/18/98	ND	20.1	-0.05	
	08/25/98	ND	19.7	ND	
7	08/04/98	ND	20.4	ND	PARTIALLY PLUGGED
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.6	0.01	
	08/25/98	ND	20.6	ND	PARTIALLY PLUGGED
7A	08/04/98	ND	20.4	-0.02	PARTIALLY PLUGGED
	08/11/98	ND	20.7	ND	
	08/18/98	ND	20.5	-0.01	
	08/25/98	ND	20.6	ND	
8A	08/04/98	ND	17.5	ND	
	08/11/98	ND	20.7	ND	
	08/18/98	ND	18.7	-0.05	
	08/25/98	ND	17.9	ND	
9	08/04/98	ND	15.1	ND	
	08/11/98	ND	18.1	-0.03	
	08/18/98	ND	13.5	-0.02	
	08/25/98	ND	12.1	-0.01	
10	08/04/98	ND	19.1	ND	
	08/11/98	ND	20.3	ND	
	08/18/98	ND	19.6	ND	
	08/25/98	ND	20.2	0.02	
10A	08/04/98	ND	19.7	ND	
	08/11/98	ND	20.5	ND	
	08/18/98	ND	20.3	ND	
	08/25/98	ND	20.1	ND	
11B	08/04/98	ND	20.2	-0.03	
	08/11/98	ND	20.9	-0.06	
	08/18/98	ND	20.3	-0.04	
	08/25/98	ND	20.5	ND	
12B	08/04/98	ND	20.1	-0.01	
	08/11/98	ND	20.8	-0.03	
	08/18/98	ND	20.5	-0.04	
	08/25/98	ND	20.6	ND	
13B	08/04/98	ND	20.2	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
13B	08/11/98	ND	20.9	-0.01	
	08/18/98	ND	20.6	-0.04	
	08/25/98	ND	20.7	-0.01	
13D	08/04/98	ND	19.9	-0.02	
	08/11/98	ND	20.9	-0.02	
	08/18/98	ND	20.5	-0.03	
	08/25/98	ND	20.7	ND	
13C	08/04/98	ND	20.2	ND	
	08/11/98	ND	20.7	-0.02	
	08/18/98	ND	20.5	-0.04	
	08/25/98	ND	20.6	ND	
13X	08/04/98	ND	20.3	ND	
	08/11/98	ND	20.5	ND	
	08/18/98	ND	20.5	ND	
	08/25/98	ND	20.6	ND	
14B	08/04/98	ND	20.4	0.06	PARTIALLY PLUGGED
	08/11/98	ND	20.7	ND	
	08/18/98	ND	20.6	0.53	
	08/25/98	ND	20.6	0.02	PARTIALLY PLUGGED
14C	08/04/98	ND	20.4	ND	
	08/11/98	ND	20.3	ND	
	08/18/98	ND	20.3	ND	
	08/25/98	ND	20.6	ND	
15A	08/04/98	ND	20.4	0.08	PARTIALLY PLUGGED
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.4	0.01	
	08/25/98	ND	20.5	2.51	PARTIALLY PLUGGED
16A	08/04/98	ND	15.7	-0.02	
	08/11/98	ND	17.8	-0.04	
	08/18/98	ND	15.7	-0.08	
	08/25/98	ND	13.4	-0.02	
16X	08/04/98	ND	20.4	ND	
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.3	0.01	
	08/25/98	ND	20.4	ND	
17A	08/04/98	ND	14.6	ND	
	08/11/98	ND	19.7	ND	
	08/18/98	ND	14.9	ND	
	08/25/98	ND	14.1	0.01	
18B	08/04/98	ND	14.2	0.01	
	08/11/98	ND	20.9	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
18B	08/18/98	ND	15.1	ND	
	08/25/98	ND	14.3	ND	
19	08/04/98	ND	18.3	ND	
	08/11/98	ND	20.1	ND	
	08/18/98	ND	19.0	ND	
	08/25/98	ND	18.8	ND	
20	08/04/98	ND	17.6	0.01	
	08/11/98	ND	18.3	0.01	
	08/18/98	ND	18.3	ND	
	08/25/98	ND	17.2	0.01	
20A	08/04/98	ND	17.0	0.01	
	08/11/98	ND	20.0	0.01	
	08/18/98	ND	17.3	-0.01	
	08/25/98	ND	17.8	ND	
22	08/04/98	ND	18.7	0.03	
	08/11/98	ND	20.7	ND	
	08/18/98	ND	18.9	-0.01	
	08/25/98	ND	19.8	ND	
22A	08/04/98	ND	19.4	0.02	
	08/11/98	ND	20.7	ND	
	08/18/98	ND	18.6	-0.01	
	08/25/98	ND	18.5	ND	
23	08/04/98	ND	20.3	0.04	
	08/11/98	ND	20.9	0.01	
	08/18/98	ND	19.8	0.05	
	08/25/98	ND	19.8	0.08	
24	08/04/98	ND	19.8	ND	
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.4	-0.01	
	08/25/98	ND	20.1	ND	
24A	08/04/98	ND	18.9	0.01	
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.6	-0.03	
	08/25/98	ND	20.3	ND	
25	08/04/98	ND	19.8	0.01	
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.6	-0.01	
	08/25/98	ND	20.2	ND	
25A	08/04/98	ND	19.1	ND	
	08/11/98	ND	20.6	ND	
	08/18/98	ND	20.6	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
25A	08/25/98	ND	20.2	-0.01	
26	08/04/98	ND	19.4	0.01	
	08/11/98	ND	20.2	ND	
	08/18/98	ND	20.5	-0.02	
	08/25/98	ND	19.4	ND	
26A	08/04/98	ND	19.4	ND	
	08/11/98	ND	20.4	ND	
	08/18/98	ND	20.6	-0.02	
	08/25/98	ND	20.0	0.01	
26B	08/04/98	ND	19.2	ND	
	08/11/98	ND	19.8	ND	
	08/18/98	ND	20.6	-0.01	
	08/25/98	ND	19.8	-0.01	
27	08/04/98	ND	20.1	ND	
	08/11/98	ND	20.4	ND	
	08/18/98	ND	20.3	0.01	
	08/25/98	ND	20.2	0.03	
27A	08/04/98	ND	18.4	ND	
	08/11/98	ND	20.1	ND	
	08/18/98	ND	19.2	ND	
	08/25/98	ND	18.8	0.04	
28	08/04/98	ND	19.7	0.01	
	08/11/98	ND	20.7	ND	
	08/18/98	ND	20.5	ND	
	08/25/98	ND	20.4	0.03	
30A	08/04/98	ND	19.8	0.29	
	08/11/98	ND	20.7	ND	
	08/18/98	ND	19.8	0.08	
	08/25/98	ND	19.6	0.08	PARTILLY PULLED
31	08/04/98	ND	19.5	0.04	
	08/11/98	ND	20.5	ND	
	08/18/98	ND	20.6	0.02	
	08/25/98	ND	20.4	0.08	
31A	08/04/98	ND	17.8	0.04	
	08/11/98	ND	20.5	0.03	
	08/18/98	ND	20.4	0.08	
	08/25/98	ND	18.9	0.04	
32	08/04/98	ND	19.5	ND	
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.6	ND	
	08/25/98	ND	20.5	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	08/04/98	ND	19.5	ND	
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.7	ND	
	08/25/98	ND	20.7	ND	
33	08/04/98	ND	19.7	ND	
	08/11/98	ND	20.6	ND	
	08/18/98	ND	20.6	ND	
	08/25/98	ND	20.3	ND	
34	08/04/98	ND	16.2	-0.02	
	08/11/98	ND	20.1	ND	
	08/18/98	ND	18.4	ND	
	08/25/98	ND	17.2	ND	
35	08/04/98	ND	20.4	ND	
	08/11/98	ND	20.6	ND	
	08/18/98	ND	20.7	-0.01	
	08/25/98	ND	20.6	ND	
36B	08/04/98	ND	18.4	ND	
	08/11/98	ND	19.5	ND	
	08/18/98	ND	18.9	ND	
	08/25/98	ND	16.4	ND	
37	08/04/98	ND	18.2	-0.02	
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.7	ND	
	08/25/98	ND	20.7	ND	
38	08/04/98	ND	20.3	ND	
	08/11/98	ND	20.3	ND	
	08/18/98	ND	20.7	ND	
	08/25/98	0.2	20.2	ND	
39	08/04/98	ND	20.4	0.06	
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.4	0.03	
	08/25/98	ND	20.9	0.01	
40	08/04/98	ND	19.8	ND	
	08/11/98	ND	20.6	ND	
	08/18/98	ND	20.7	ND	
	08/25/98	ND	20.7	0.01	
41	08/04/98	ND	19.1	-0.01	
	08/11/98	ND	19.8	ND	
	08/18/98	ND	19.8	ND	
	08/25/98	ND	19.8	0.01	
42	08/04/98	ND	15.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
42	08/11/98	ND	19.7	-0.01	
	08/18/98	ND	20.7	ND	
	08/25/98	ND	20.1	ND	
43	08/04/98	ND	15.1	-0.03	
	08/11/98	ND	11.5	-0.03	
	08/18/98	ND	14.8	-0.02	
	08/25/98	ND	8.4	-0.02	
45	08/04/98	ND	19.8	-0.04	
	08/11/98	ND	20.5	0.01	
	08/18/98	ND	20.7	-0.05	
	08/25/98	ND	20.1	-0.01	
46	08/04/98	ND	19.8	0.02	
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.4	ND	
	08/25/98	NT	NT	NT	
1B'	08/04/98	ND	20.2	-0.01	
	08/11/98	ND	20.9	-0.05	
	08/18/98	ND	20.6	ND	
	08/25/98	ND	20.6	-0.02	
1C'	08/04/98	ND	20.1	-0.01	
	08/11/98	ND	20.8	-0.03	
	08/18/98	ND	20.3	-0.01	
	08/25/98	ND	19.6	-0.01	
2B'	08/04/98	ND	20.4	ND	
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.5	-0.03	
	08/25/98	ND	19.7	ND	
2C'	08/04/98	ND	19.5	ND	
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.5	-0.02	
	08/25/98	ND	20.6	ND	
3B'	08/04/98	ND	19.7	ND	
	08/11/98	ND	20.9	-0.01	
	08/18/98	ND	20.4	-0.16	
	08/25/98	ND	20.6	-0.02	
3C'	08/04/98	ND	20.2	ND	
	08/11/98	ND	20.9	-0.06	
	08/18/98	ND	20.5	-0.02	
	08/25/98	ND	20.5	-0.08	
4B'	08/04/98	ND	19.8	ND	
	08/11/98	ND	20.8	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
4B'	08/18/98	ND	20.4	-0.02	
	08/25/98	ND	20.5	-0.02	
4C'	08/04/98	ND	19.4	ND	
	08/11/98	ND	20.8	ND	
	08/18/98	ND	20.4	ND	
	08/25/98	ND	20.6	-0.01	
5B'	08/04/98	ND	19.5	ND	
	08/11/98	ND	20.5	-0.02	
	08/18/98	ND	20.6	-0.02	
	08/25/98	ND	20.2	-0.02	
5C'	08/04/98	ND	20.1	ND	
	08/11/98	ND	20.9	-0.03	
	08/18/98	ND	20.3	-0.01	
	08/25/98	ND	20.6	ND	
6B'	08/04/98	ND	19.2	0.01	
	08/11/98	ND	20.8	-0.01	
	08/18/98	ND	20.6	-0.03	
	08/25/98	ND	20.6	0.01	
6C'	08/04/98	ND	19.5	0.01	
	08/11/98	ND	20.6	-0.01	
	08/18/98	ND	20.6	-0.02	
	08/25/98	ND	20.4	ND	
7B'	08/04/98	ND	18.2	ND	
	08/11/98	ND	19.9	ND	
	08/18/98	ND	20.4	ND	
	08/25/98	ND	18.6	0.01	
7C'	08/04/98	ND	17.9	ND	
	08/11/98	ND	19.7	ND	
	08/18/98	ND	19.7	ND	
	08/25/98	ND	20.4	ND	
8B'	08/04/98	ND	20.1	ND	
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.5	-0.01	
	08/25/98	ND	20.4	-0.01	
8C'	08/04/98	ND	20.2	ND	
	08/11/98	ND	20.9	ND	
	08/18/98	ND	20.5	-0.02	
	08/25/98	ND	20.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
P-1	08/25/98	ND	20.6	ND	-0.14	0.01	91	1	
P-2	08/25/98	ND	19.7	1.2	-0.14	ND	83	0	
P-3	08/25/98	ND	20.6	ND	-0.14	ND	86	0	
P-4	08/25/98	ND	20.6	ND	-0.16	ND	84	0	
P-5	08/25/98	ND	20.6	ND	-0.16	ND	84	0	
P-6	08/25/98	ND	20.6	ND	-0.16	ND	88	0	
P-7	08/25/98	ND	16.7	2.6	-0.16	ND	83	0	
P-10	08/25/98	0.7	15.9	3.8	-0.20	ND	87	0	
P-11	08/25/98	ND	19.7	1.1	-0.20	-0.20	89	1	
P-13	08/25/98	ND	20.6	ND	-0.20	0.01	86	0	
P-14	08/25/98	ND	20.6	ND	-0.22	ND	84	0	
P-15	08/25/98	ND	20.5	ND	-0.22	ND	83	0	
P-16	08/25/98	ND	20.6	ND	-0.22	-0.1	84	0	
P-17	08/25/98	ND	16.8	4.1	-0.22	0.18	93	1	
P-18	08/25/98	ND	16.1	3.9	-0.22	0.05	96	1	
P-19	08/25/98	ND	9.8	8.7	-0.24	0.14	96	2	
P-20	08/25/98	ND	16.0	1.6	-0.24	0.03	94	1	
P-21	08/25/98	ND	13.3	4.6	-0.24	ND	94	0	
P-22	08/25/98	ND	17.8	1.6	-0.24	ND	91	0	
P-23	08/25/98	7.0	12.3	7.1	-0.26	-0.12	118	8	
P-24	08/25/98	12.4	4.5	15.5	-0.26	-0.10	119	12	
P-25	08/25/98	9.8	12.4	7.8	-0.25	-0.11	114	8	
P-26	08/25/98	ND	20.1	ND	-0.28	0.03	90	1	
P-27	08/25/98	ND	17.7	1.7	-0.28	0.02	92	1	
P-28	08/25/98	11.8	2.8	22.2	-0.24	-0.12	121	16	
P-29	08/25/98	6.7	12.5	7.7	-0.22	-0.17	111	12	
P-30	08/25/98	6.7	7.6	12.1	-0.22	-0.18	123	16	
P-31	08/25/98	ND	19.9	ND	-0.22	0.04	93	1	
P-32	08/25/98	ND	19.8	0.4	-0.20	0.03	94	1	
P-33	08/25/98	ND	19.7	1.2	-0.20	0.02	92	1	
P-34	08/25/98	ND	20.3	ND	-0.20	0.02	88	1	
P-35	08/25/98	1.1	12.1	7.3	-0.20	-0.08	108	8	
P-36	08/25/98	ND	12.3	6.0	-0.18	ND	97	0	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
P-37	08/25/98	ND	20.4	ND	-0.18	0.01	93	0	
P-38	08/25/98	ND	16.7	3.1	-0.18	ND	95	0	
P-39	08/25/98	ND	20.2	ND	-0.18	-0.01	96	0	
W-1	08/25/98	12.9	2.0	19.4	-1.2	-0.24	91	0	
W-2	08/25/98	14.8	0.6	22.3	NT	-0.08	88	0	
W-3	08/25/98	21.3	0.4	28.6	NT	-0.15	87	0	
W-4	08/25/98	11.8	0.2	27.3	NT	-0.42	87	0	
W-5	08/25/98	3.4	11.8	18.9	NT	-0.84	88	NT	
W-6	08/25/98	27.2	0.1	34.6	-1.2	-0.24	89	0	
W-7	08/25/98	28.2	5.2	22.8	-1.3	-1.00	88	0	
W-8	08/25/98	17.8	0.3	24.6	NT	-0.11	87	0	
W-9	08/25/98	16.3	0.2	23.9	NT	-0.22	89	0	
W-10	08/25/98	16.1	0.1	24.1	-1.3	-0.21	88	0	
W-11	08/25/98	26.4	1.1	32.4	NT	-0.20	87	0	
W-12	08/25/98	12.8	4.5	22.3	NT	-0.04	89	0	
W-13	08/25/98	14.4	0.2	21.6	NT	-0.12	87	NT	
W-14	08/25/98	13.2	1.7	19.6	-1.4	-0.22	88	NT	
W-15	08/25/98	ND	19.1	2.3	-1.6	-0.18	87	NT	
W-16	08/04/98	31.4	ND	31.5	-1.3	-0.51	104	48	
W-17	08/04/98	30.8	2.2	29.5	-1.4	-0.62	105	48	
W-18	08/04/98	21.6	ND	28.8	-2.0	-0.24	95	33	
W-20	08/04/98	27.6	0.4	28.6	-1.2	-0.32	111	48	
W-21	08/04/98	32.7	ND	32.4	-1.2	1.1	104	28	
W-23	08/04/98	29.7	0.6	29.4	-32	-1.9	96	38	
W-24	08/04/98	25.8	1.3	25.3	-25.5	-1.2	108	57	
W-25	08/04/98	53.2	0.2	37.5	-25.5	-23.3	109	56	
W-26	08/04/98	6.9	7.1	16.2	-21.4	-0.72	93	48	
W-27	08/04/98	46.1	0.9	37.1	-32	-12.4	94	19	
W-28	08/04/98	NT	NT	NT	NT	NT		0	UNDER A DAMAGED CAR
W-28A	08/04/98	40.3	1.1	33.7	-24	-0.24	114	12	ADJ TO -2.6
W-28B	08/04/98	27.3	0.4	28.5	-24	-0.04	111	0	ADJ TO -0.72
W-29	08/04/98	29.7	0.3	30.5	-7 TO -9	-3 TO -5	90	0	
W-29A	08/04/98	31.3	0.6	31.7	-1.1	-1.0	91	48	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
W-30	08/04/98	9.5	6.0	15.6	-21	-17	105	72	
W-31	08/04/98	47.7	1.5	37.7	-21	-16.6	106	36	
W-32	08/04/98	28.2	0.6	29.6	-21.0	-0.16	111	12	
W-33	08/04/98	30.7	3.9	22.8	-20.0	-19	108	86	
W-36	08/04/98	43.4	0.9	34.6	-21.4	-10.5	108	133	
W-37	08/04/98	19.8	4.9	16.4	-21.4	-7.5	96	86	
W-37A	08/04/98	29.1	0.8	31.6	-5	-0.29	119	12	
W-38	08/04/98	33.0	0.2	32.7	-21	-1.6	86	0	
W-38	08/25/98	33.0	0.2	32.7	-19 TO -23	-1.6	86	0	
W-38A	08/04/98	39.0	3.1	32.1	-7	-7	93	133	
W-38B	08/04/98	46.2	0.7	39.0	-0.16	-0.14	91	48	
W-39	08/04/98	ND	19.2	1.1	-11.5	-4.5	84	19	
W-40	08/04/98	ND	20.4	ND	-11.5	0	83	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							123		
Minimum:							83		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
08/04/98	23.6	4.1	-34.0	11.6	670	1550	1406
08/11/98	23.0	5.3	-39.0	12.2	665	1545	1379
08/18/98	25.3	4.8	-37.5	14.0	810	1546	781
08/28/98	26.4	2.9	-33.0	13.2	775	1550	1348
=====	=====	=====	=====	=====	=====	=====	=====
Total:							4914
Minimum:						1545	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column

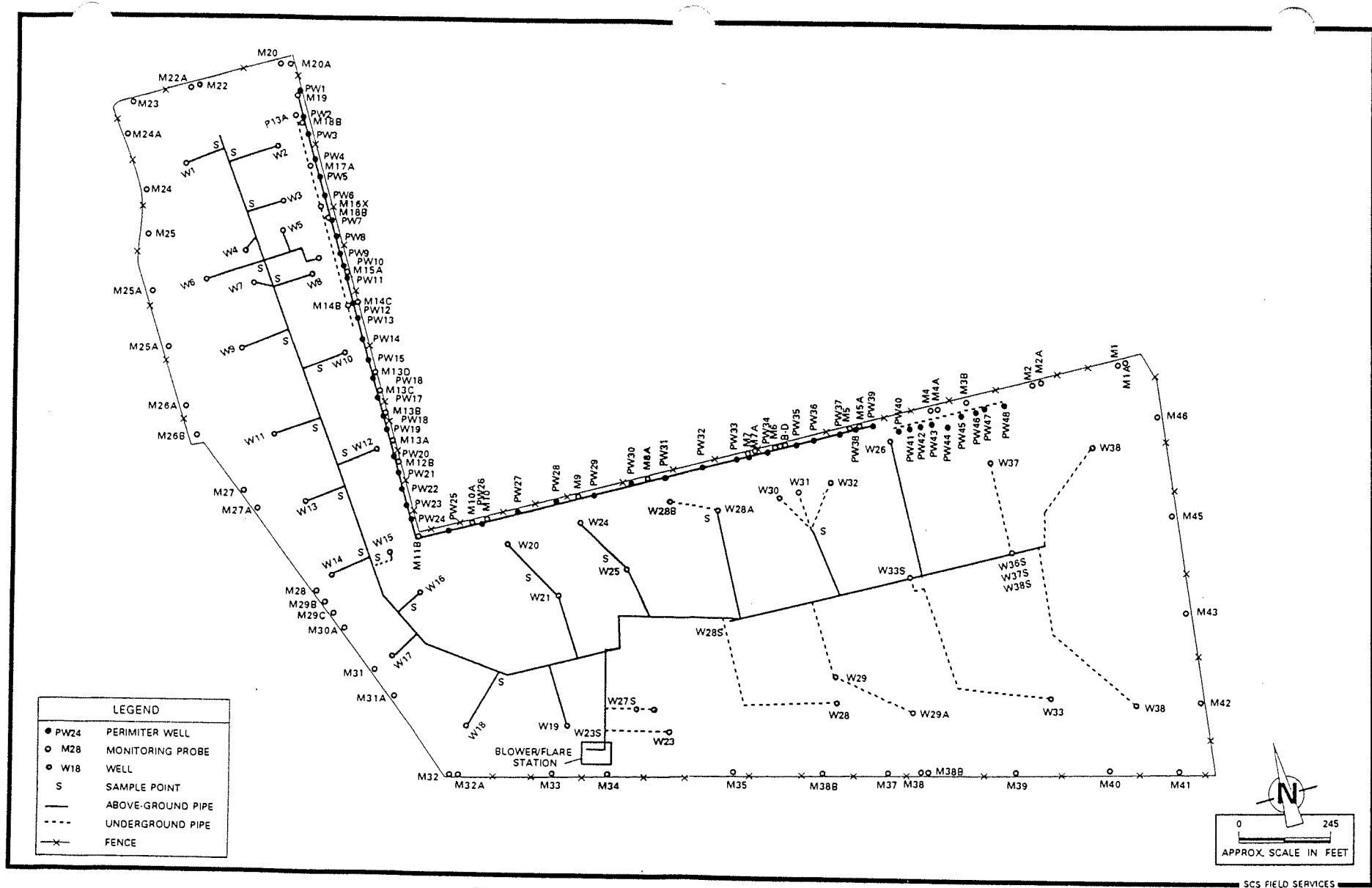


Figure 1. Hewitt North Hollywood/Probes and Well Field.

## **SCS FIELD SERVICES, INC.**

October 30, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities, North Hollywood, California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of September 1 through 30, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

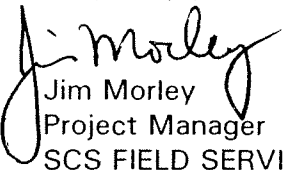
- No methane gas was detected at any of the monitoring wells tested, except for Monitoring Well No. 43 (0.2 percent by volume; well below the LEL). The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 8,358 gallons as measured at the flare inlet flow meter.
- On September 3, 1998, SCS-FS responded to a callout. There was an odor complaint from L.A. Salvage employees. SCS-FS tested around all the insurance and L.A. Salvage trailers and offices for methane. No methane gas was detected at the locations tested.
- On September 10, 1998, SCS-FS finished replacing the repaired condensate pumps with the existing pumps.
- On September 15, 1998, SCS-FS repaired the hoses on the sample ports for Well Nos. 5, 10, 14, and 15. Also, the 6-inch PVC lateral line was repaired for Well No. 5.



Mr. George Cosby  
October 30, 1998  
Page Two

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Jim Morley  
Project Manager  
SCS FIELD SERVICES, INC.

JM:vlf  
O:\COMMON\SCSFS\LBREPORT\0789003

## SCS FIELD SERVICES, INC.

October 30, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of September 1 through 30, 1998.

### Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames typically do not propagate through soils.



Mr. George Cosby  
October 30, 1998  
Page Two

#### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

#### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the second as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

#### Monitoring Well Testing

During the reporting period, 0.2 percent methane gas (well below the LEL) was detected at Monitoring Well 43. No methane gas was detected in any of the other monitoring probes tested. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

#### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

Mr. George Cosby  
October 30, 1998  
Page Three

On September 3, 1998, SCS-FS responded to an odor complaint. SCS-FS tested around the insurance and L.A. Salvage offices and trailers for methane. No methane gas was detected at the locations tested.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second is a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells indicated that a significant number of wells exhibited an overpull condition. This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The temperatures ranged from 72 to 123 degrees Fahrenheit. The result of this survey indicated subsurface temperatures are in the normal to high range for anaerobic decomposition.

To determine flow rates at extraction wells, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

Mr. George Cosby  
October 30, 1998  
Page Four

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, no unscheduled shut-downs occurred.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1545 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits.

The total amount of LFG condensate injected into the flare for the month was approximately 8,358 gallons as measured by the flare inlet flow meter.

Additionally, on September 10, 1998, SCS-FS finished replacing the repaired condensate pumps with the existing ones.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

On September 15, 1998, SCS-FS repaired the hoses on the sample ports for Well Nos. 5, 10, 14, and 15. The 6-inch PVC lateral line for Well No. 5 was also repaired.

Mr. George Cosby  
October 30, 1998  
Page Five

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. The next quarterly site observation is scheduled to be conducted in October 1998.

#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician  
SCS FIELD SERVICES, INC.



Jim Morley  
Project Manager  
SCS FIELD SERVICES, INC.

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	09/01/98	NO	20.4	NO	
	09/08/98	NO	20.6	-0.02	
	09/16/98	NO	20.6	ND	
	09/22/98	NO	20.5	-0.02	
	09/29/98	NO	20.7	ND	
1A	09/01/98	ND	17.9	NO	
	09/08/98	NO	18.4	-0.01	
	09/16/98	NO	20.2	0.01	
	09/22/98	NO	19.4	NO	
	09/29/98	NO	18.8	NO	
2	09/01/98	NO	18.9	NO	
	09/08/98	NO	19.7	NO	
	09/16/98	NO	20.1	NO	
	09/22/98	20.3	NO		
	09/29/98	NO	19.8	NO	
2A	09/01/98	NO	19.6	NO	
	09/08/98	NO	20.1	NO	
	09/16/98	NO	20.4	NO	
	09/22/98	NO	20.5	NO	
	09/29/98	NO	20.4	NO	
3B	09/01/98	NO	12.0	NO	
	09/08/98	NO	15.3	0.01	
	09/16/98	NO	17.4	ND	
	09/22/98	NO	18.8	NO	
	09/29/98	NO	20.5	ND	
4	09/01/98	NO	20.5	NO	
	09/08/98	NO	20.1	NO	
	09/16/98	NO	20.6	0.03	
	09/22/98	NO	20.7	0.02	
	09/29/98	NO	20.3	NO	
4A	09/01/98	ND	18.4	NO	
	09/08/98	NO	19.4	NO	
	09/16/98	ND	20.2	-0.02	
	09/22/98	ND	20.5	ND	
	09/29/98	ND	19.8	-0.02	
5	09/01/98	NO	20.4	-0.02	
	09/08/98	ND	20.8	-0.03	
	09/16/98	NO	20.6	-0.08	
	09/22/98	ND	20.8	-0.08	
	09/29/98	NO	20.6	-0.10	
5A	09/01/98	NO	20.4	NO	
	09/08/98	NO	20.3	ND	
	09/16/98	NO	20.6	-0.02	

TR=Trace Amounts Detected

NO=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
5A	09/22/98	ND	20.9	-0.02	
	09/29/98	ND	20.6	-0.02	
6B	09/01/98	ND	20.2	ND	
	09/08/98	ND	19.1	ND	
	09/16/98	ND	20.2	ND	
	09/22/98	ND	20.2	ND	
	09/29/98	ND	18.9	-0.09	
6C	09/01/98	ND	17.3	0.01	
	09/08/98	ND	17.2	0.01	
	09/16/98	ND	19.1	ND	
	09/22/98	ND	17.5	ND	
	09/29/98	ND	16.9	ND	
6D	09/01/98	ND	19.6	ND	
	09/08/98	ND	19.8	-0.03	
	09/16/98	ND	20.4	-0.04	
	09/22/98	ND	20.5	-0.02	
	09/29/98	ND	19.7	-0.06	
7	09/01/98	ND	20.4	0.10	
	09/08/98	ND	20.4	0.03	
	09/16/98	ND	20.7	ND	
	09/22/98	ND	20.6	0.57	
	09/29/98	ND	20.7	0.02	PARTIALLY PLUGGED
7A	09/01/98	ND	20.4	ND	
	09/08/98	ND	20.5	0.01	
	09/16/98	ND	20.5	0.01	
	09/22/98	ND	20.7	-0.05	
	09/29/98	ND	20.6	ND	
8A	09/01/98	ND	18.5	-0.02	
	09/08/98	ND	18.1	ND	
	09/16/98	ND	19.9	0.02	
	09/22/98	ND	18.4	ND	
	09/29/98	ND	18.1	-0.02	
9	09/01/98	ND	20.5	-0.01	
	09/08/98	ND	20.4	0.03	
	09/16/98	ND	20.7	-0.02	
	09/22/98	ND	19.5	-0.03	
	09/29/98	ND	20.1	-0.04	
10	09/01/98	ND	19.6	-0.01	
	09/08/98	ND	19.8	0.18	
	09/16/98	ND	19.9	0.07	
	09/22/98	ND	20.1	0.11	
	09/29/98	ND	20.5	-0.03	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
10A	09/01/98	ND	20.3	-0.01	
	09/08/98	ND	20.5	ND	
	09/16/98	ND	20.5	ND	
	09/22/98	ND	20.6	-0.01	
	09/29/98	ND	20.4	-0.01	
11B	09/01/98	ND	20.7	-0.02	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	20.6	-0.02	
	09/22/98	ND	20.9	-0.05	
	09/29/98	ND	20.7	-0.06	
12B	09/01/98	ND	20.6	ND	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.8	ND	
	09/29/98	ND	20.6	-0.02	
13B	09/01/98	ND	20.7	-0.01	
	09/08/98	ND	20.6	-0.01	
	09/16/98	ND	20.7	ND	
	09/22/98	ND	20.8	-0.03	
	09/29/98	ND	20.6	-0.02	
13D	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.6	-0.01	
	09/16/98	ND	20.7	ND	
	09/22/98	ND	20.7	ND	
	09/29/98	ND	20.6	-0.02	
13C	09/01/98	ND	20.4	ND	
	09/08/98	ND	20.5	-0.02	
	09/16/98	ND	20.7	ND	
	09/22/98	ND	20.7	ND	
	09/29/98	ND	18.4	-0.02	
13X	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.6	ND	
	09/16/98	ND	20.5	ND	
	09/22/98	ND	20.6	0.02	
	09/29/98	ND	20.1	0.04	
14B	09/01/98	ND	20.6	0.47	
	09/08/98	ND	19.2	ND	
	09/16/98	ND	20.4	ND	
	09/22/98	ND	20.7	ND	
	09/29/98	ND	20.6	0.02	PARTIALLY PLUGGED
14C	09/01/98	ND	20.4	ND	
	09/08/98	ND	20.6	ND	
	09/16/98	ND	20.6	1.2	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
14C	09/22/98	ND	20.7	ND	
	09/29/98	ND	20.4	0.03	
15A	09/01/98	ND	20.6	0.01	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	20.7	ND	
	09/22/98	ND	20.6	1.2	
	09/29/98	ND	20.7	0.02	PARTIALLY PLUGGED
16A	09/01/98	ND	13.9	-0.05	
	09/08/98	ND	15.2	ND	
	09/16/98	ND	15.3	-0.05	
	09/22/98	ND	16.0	-0.06	
	09/29/98	ND	14.3	-0.04	
16X	09/01/98	ND	19.9	-0.01	
	09/08/98	ND	20.4	ND	
	09/16/98	ND	20.4	ND	
	09/22/98	ND	20.6	-0.01	
	09/29/98	ND	20.2	ND	
17A	09/01/98	ND	13.6	-0.02	
	09/08/98	ND	13.7	-0.02	
	09/16/98	ND	14.6	-0.03	
	09/22/98	ND	15.2	-0.06	
	09/29/98	ND	13.4	-0.02	
18B	09/01/98	ND	14.2	-0.02	
	09/08/98	ND	15.6	-0.01	
	09/16/98	ND	15.3	0.01	
	09/22/98	ND	16.5	-0.02	
	09/29/98	ND	14.1	ND	
19	09/01/98	ND	18.6	ND	
	09/08/98	ND	19.6	ND	
	09/16/98	ND	19.4	-0.01	
	09/22/98	ND	19.9	0.01	
	09/29/98	ND	19.1	ND	
20	09/01/98	ND	18.5	-0.01	
	09/08/98	ND	18.7	ND	
	09/16/98	ND	18.2	ND	
	09/22/98	ND	18.2	ND	
	09/29/98	ND	18.6	ND	
20A	09/01/98	ND	17.7	-0.01	
	09/08/98	ND	17.6	ND	
	09/16/98	ND	17.7	0.01	
	09/22/98	ND	17.9	ND	
	09/29/98	ND	17.4	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
22	09/01/98	ND	18.6	ND	
	09/08/98	ND	19.2	ND	
	09/16/98	ND	18.1	ND	
	09/22/98	ND	18.8	ND	
	09/29/98	ND	19.3	ND	
22A	09/01/98	ND	18.7	0.01	
	09/08/98	ND	20.0	ND	
	09/16/98	ND	18.4	ND	
	09/22/98	ND	19.2	ND	
	09/29/98	ND	18.2	ND	
23	09/01/98	ND	20.0	0.23	
	09/08/98	ND	20.4	0.31	
	09/16/98	ND	19.9	1.02	
	09/22/98	ND	20.3	ND	
	09/29/98	ND	20.6	0.04	
24	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.7	-0.02	
	09/16/98	ND	20.6	-0.01	
	09/22/98	ND	20.7	-0.02	
	09/29/98	ND	20.7	-0.02	
24A	09/01/98	ND	20.1	ND	
	09/08/98	ND	20.4	-0.01	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.7	ND	
	09/29/98	ND	20.5	ND	
25	09/01/98	ND	20.7	-0.02	
	09/08/98	ND	20.7	-0.02	
	09/16/98	ND	20.7	-0.01	
	09/22/98	ND	20.7	-0.02	
	09/29/98	ND	20.6	ND	
25A	09/01/98	ND	19.8	ND	
	09/08/98	ND	20.6	ND	
	09/16/98	ND	19.2	ND	
	09/22/98	ND	20.7	-0.02	
	09/29/98	ND	20.3	ND	
26	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.5	ND	
	09/16/98	ND	20.6	-0.01	
	09/22/98	ND	20.6	ND	
	09/29/98	ND	20.2	ND	
26A	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.8	ND	
	09/16/98	ND	20.5	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26A	09/22/98	ND	20.4	ND	
	09/29/98	ND	20.2	ND	
26B	09/01/98	ND	20.1	ND	
	09/08/98	ND	20.4	ND	
	09/16/98	ND	20.4	-0.01	
	09/22/98	ND	20.5	-0.01	
	09/29/98	ND	20.5	ND	
27	09/01/98	ND	20.2	ND	
	09/08/98	ND	20.6	-0.01	
	09/16/98	ND	19.7	ND	
	09/22/98	ND	19.8	ND	
	09/29/98	ND	20.3	ND	
27A	09/01/98	ND	18.8	ND	
	09/08/98	ND	19.4	-0.02	
	09/16/98	ND	19.6	ND	
	09/22/98	ND	18.4	-0.02	
	09/29/98	ND	18.6	ND	
28	09/01/98	ND	19.7	ND	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	19.9	ND	
	09/22/98	ND	19.3	ND	
	09/29/98	ND	17.3	ND	
30A	09/01/98	ND	19.3	0.12	
	09/08/98	ND	20.6	0.02	
	09/16/98	ND	19.8	0.07	
	09/22/98	ND	19.9	0.04	
	09/29/98	ND	20.3	0.06	
31	09/01/98	ND	20.4	0.02	
	09/08/98	ND	20.8	0.56	
	09/16/98	ND	20.6	0.19	
	09/22/98	ND	20.0	0.21	
	09/29/98	ND	20.6	0.06	
31A	09/01/98	ND	18.7	ND	
	09/08/98	ND	20.7	0.01	
	09/16/98	ND	18.9	0.03	
	09/22/98	ND	18.9	0.02	
	09/29/98	ND	19.6	0.08	
32	09/01/98	ND	20.6	ND	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	20.4	ND	
	09/22/98	ND	20.1	ND	
	09/29/98	ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	09/01/98	ND	20.5	ND	
	09/08/98	ND	20.8	ND	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.2	ND	
	09/29/98	ND	20.6	ND	
33	09/01/98	ND	20.2	ND	
	09/08/98	ND	20.3	ND	
	09/16/98	ND	20.3	ND	
	09/22/98	ND	20.1	ND	
	09/29/98	ND	20.5	ND	
34	09/01/98	ND	14.8	ND	
	09/08/98	ND	17.2	0.01	
	09/16/98	ND	17.3	ND	
	09/22/98	ND	19.1	-0.02	
	09/29/98	ND	18.3	ND	
35	09/01/98	ND	20.4	ND	
	09/08/98	ND	20.3	ND	
	09/16/98	ND	20.4	ND	
	09/22/98	ND	20.8	ND	
	09/29/98	ND	20.6	ND	
36B	09/01/98	ND	15.3	0.01	
	09/08/98	ND	15.2	0.01	
	09/16/98	ND	19.2	-0.02	
	09/22/98	ND	20.1	-0.01	
	09/29/98	ND	19.7	-0.06	
37	09/01/98	ND	20.2	ND	
	09/08/98	ND	20.4	ND	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.8	ND	
	09/29/98	ND	20.6	0.02	
38	09/01/98	ND	20.4	ND	
	09/08/98	ND	20.0	ND	
	09/16/98	ND	19.7	0.01	
	09/22/98	ND	20.3	ND	
	09/29/98	ND	20.3	0.01	
39	09/01/98	ND	20.7	0.01	
	09/08/98	ND	20.4	ND	
	09/16/98	ND	20.4	0.10	
	09/22/98	ND	20.9	0.04	
	09/29/98	ND	20.5	1.0 TO 0.04	
40	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.4	ND	
	09/16/98	ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
40	09/22/98	ND	20.4	ND	
	09/29/98	ND	20.5	ND	
41	09/01/98	ND	17.2	0.01	
	09/08/98	ND	18.0	0.01	
	09/16/98	ND	18.3	0.01	
	09/22/98	ND	20.3	ND	
	09/29/98	ND	10.2	-0.04	
42	09/01/98	ND	19.9	ND	
	09/08/98	ND	20.3	ND	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.6	ND	
	09/29/98	ND	20.1	ND	
43	09/01/98	ND	2.4	-0.03	
	09/08/98	ND	12.2	0.01	
	09/16/98	ND	9.3	-0.02	
	09/22/98	0.2	15.4	ND	
	09/29/98	ND	20.1	0.02	
45	09/01/98	ND	19.3	-0.01	
	09/08/98	ND	20.2	ND	
	09/16/98	ND	19.6	-0.03	
	09/22/98	ND	20.7	ND	
	09/29/98	ND	20.5	-0.04	
46	09/01/98	ND	20.3	0.01	
	09/08/98	ND	20.3	ND	
	09/16/98	ND	20.1	ND	
	09/22/98	ND	20.6	ND	
	09/29/98	ND	19.8	0.01	
1B'	09/01/98	ND	20.4	ND	
	09/08/98	ND	20.6	-0.04	
	09/16/98	ND	20.5	ND	
	09/22/98	ND	20.6	-0.02	
	09/29/98	ND	20.7	-0.01	
1C'	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.6	-0.04	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.8	ND	
	09/29/98	ND	20.2	ND	
2B'	09/01/98	ND	20.3	ND	
	09/08/98	ND	20.6	-0.01	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.9	-0.04	
	09/29/98	ND	20.8	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
2C'	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	20.6	-0.01	
	09/22/98	ND	20.8	-0.04	
	09/29/98	ND	20.7	-0.02	
3B'	09/01/98	ND	20.7	ND	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.7	-0.11	
	09/29/98	ND	20.5	ND	
3C'	09/01/98	ND	20.7	-0.01	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	18.2	0.01	
	09/22/98	ND	19.5	-0.01	
	09/29/98	ND	20.4	-0.06	
4B'	09/01/98	ND	19.3	-0.01	
	09/08/98	ND	20.5	ND	
	09/16/98	ND	20.1	ND	
	09/22/98	ND	20.6	-0.05	
	09/29/98	ND	20.7	ND	
4C'	09/01/98	ND	20.6	ND	
	09/08/98	ND	19.7	ND	
	09/16/98	ND	20.5	ND	
	09/22/98	ND	19.8	-0.02	
	09/29/98	ND	20.8	-0.01	
5B'	09/01/98	ND	20.6	-0.02	
	09/08/98	ND	20.4	ND	
	09/16/98	ND	20.0	ND	
	09/22/98	ND	20.8	-0.10	
	09/29/98	ND	20.5	-0.01	
5C'	09/01/98	ND	20.5	-0.02	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	19.9	ND	
	09/22/98	ND	20.8	-0.06	
	09/29/98	ND	20.7	-0.02	
68'	09/01/98	ND	19.5	ND	
	09/08/98	ND	20.6	0.01	
	09/16/98	ND	20.4	ND	
	09/22/98	ND	18.0	ND	
	09/29/98	ND	19.1	ND	
6C'	09/01/98	ND	20.6	-0.01	
	09/08/98	ND	20.3	ND	
	09/16/98	ND	20.4	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C'	09/22/98	ND	20.8	ND	
	09/29/98	ND	20.6	ND	
7B'	09/01/98	ND	18.5	ND	
	09/08/98	ND	19.0	ND	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.8	-0.01	
	09/29/98	ND	17.4	ND	
7C'	09/01/98	ND	19.0	ND	
	09/08/98	ND	18.9	ND	
	09/16/98	ND	20.3	ND	
	09/22/98	ND	19.9	ND	
	09/29/98	ND	20.6	ND	
8B'	09/01/98	ND	18.7	-0.02	
	09/08/98	ND	20.7	ND	
	09/16/98	ND	20.6	ND	
	09/22/98	ND	20.8	-0.06	
	09/29/98	ND	20.7	-0.02	
8C'	09/01/98	ND	20.6	-0.01	
	09/08/98	ND	20.4	ND	
	09/16/98	ND	19.7	0.01	
	09/22/98	ND	20.7	-0.03	
	09/29/98	ND	20.1	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0.89003.00

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
W-22B	09/08/98	19.0	ND	26.2	-29.0	-0.48	89	0	
P-1	09/08/98	ND	19.7	ND	-0.14	0.10	82	1	
P-2	09/08/98	ND	19.5	10.0	-0.14	0.03	84	1	
P-3	09/08/98	ND	19.9	1.6	-0.14	0.14	86	1	
P-4	09/08/98	ND	14.9	2.8	-0.16	0.04	87	0	
P-5	09/08/98	ND	17.9	1.7	-0.16	0.03	86	1	
P-6	09/08/98	ND	19.8	1.0	-0.16	0.01	84	0	
P-7	09/08/98	ND	18.3	1.6	-0.16	0.06	84	1	
P-10	09/08/98	ND	7.2	11.3	-0.20	-0.02	93	4	
P-11	09/08/98	ND	18.1	1.1	-0.20	0.06	84	1	
P-13	09/08/98	ND	17.2	2.7	-0.20	0.14	86	2	
P-14	09/08/98	ND	10.2	3.3	-0.20	0.04	84	0	
P-15	09/08/98	ND	18.3	1.1	-0.20	0.08	85	1	
P-16	09/08/98	ND	14.7	1.6	-0.20	0.07	84	1	
P-17	09/08/98	ND	9.8	3.1	-0.20	0.22	86	1	
P-18	09/08/98	ND	16.9	2.7	-0.20	0.06	86	2	
P-19	09/08/98	ND	15.4	3.6	-0.20	0.14	84	2	
P-20	09/08/98	ND	13.7	4.3	-0.20	0.02	92	1	
P-21	09/08/98	ND	19.9	1.2	-0.20	0.02	84	1	
P-22	09/08/98	9.6	5.1	15.2	-0.22	-0.14	118	16	
P-23	09/08/98	4.5	8.2	11.8	-0.22	-0.17	121	12	
P-24	09/08/98	6.9	12.0	8.9	-0.24	-0.11	117	12	
P-25	09/08/98	ND	20.4	ND	-0.24	0.03	84	0	
P-26	09/08/98	ND	16.7	1.4	-0.24	0.01	86	0	
P-27	09/08/98	ND	17.4	2.4	-0.25	0.03	86	0	
P-28	09/08/98	6.5	2.0	19.6	-0.23	-0.16	121	12	
P-29	09/08/98	4.8	8.8	12.0	-0.23	-0.18	119	8	
P-30	09/08/98	4.0	9.0	11.4	-0.20	-0.16	123	12	
P-31	09/08/98	ND	20.4	ND	-0.18	ND	84	0	
P-32	09/08/98	ND	20.3	ND	-0.18	ND	86	0	
P-33	09/08/98	ND	19.5	1.4	-0.18	0.01	84	0	
P-34	09/08/98	ND	20.4	ND	-0.18	ND	84	0	
P-35	09/08/98	ND	10.6	8.4	-0.18	-0.10	101	8	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
P-36	09/08/98	ND	14.2	7.6	-0.16	-0.02	91	1	
P-37	09/08/98	ND	20.2	ND	-0.16	ND	82	0	
P-38	09/08/98	ND	19.4	1.2	-0.14	ND	83	0	
P-39	09/08/98	ND	20.3	ND	-0.14	ND	84	0	
W-1	09/08/98	15.2	ND	23.7	-1.1	-0.18	78	0	
W-2	09/08/98	12.3	ND	22.4	NT	-0.03	76	0	
W-3	09/08/98	19.4	5.5	15.5	NT	-0.12	74	0	
W-4	09/08/98	23.7	ND	26.9	NT	-0.31	81	0	
W-5	09/08/98	ND	4.2	14.8	NT	-0.86	74	0	
W-6	09/08/98	13.8	ND	22.2	-1.1	-0.17	76	0	
W-7	09/08/98	20.4	8.8	23.9	-1.1	-0.89	98	0	
W-8	09/08/98	17.9	ND	25.4	NT	-0.09	74	0	
W-9	09/08/98	16.6	ND	23.7	NT	-0.21	76		
W-10	09/08/98	16.1	ND	23.8	-1.2	-0.14	78	0	
W-11	09/08/98	14.7	ND	22.6	NT	-0.18	76	0	
W-12	09/08/98	3.4	10.8	11.8	NT	0.02	74	0	
W-13	09/08/98	14.1	ND	21.4	NT	-0.08	74	0	
W-14	09/08/98	16.8	0.6	21.5	-1.3	-0.21	76	0	
W-15	09/08/98	ND	19.1	10.8	-1.3	-0.18	78	0	
W-16	09/08/98	30.3	ND	31.3	-2.2	-0.42	92	48	
W-17	09/08/98	29.4	0.4	32.3	-2.2	-1.1	76	67	
W-18	09/08/98	21.5	ND	27.5	-2.3	-0.36	76	38	
W-20	09/08/98	27.2	ND	28.8	-2.2	-0.42	87	57	
W-21	09/08/98	29.7	ND	30.8	-2.2	-1.9	97	28	
W-23	09/08/98	31.3	ND	30.3	-30.0	-1.9	75	86	
W-24	09/08/98	1.9	18.2	2.9	-29.5	-0.44	82	19	
W-25	09/08/98	46.4	0.2	36.1	-29.5	-27.0	83	16	
W-26	09/08/98	7.1	4.1	13.8	-0.94	-1.1	91	38	
W-27	09/08/98	41.6	0.3	32.3	-30.0	-12.5	75	171	
W-28	09/08/98	NT	NT	NT	NT	NT	NT	0	
W-28A	09/08/98	31.3	ND	31.7	-29.0	-1.6	111	32	
W-29	09/08/98	23.7	2.9	31.8	-6 TO -8	-4 TO -6	74	0	
W-29A	09/08/98	32.1	ND	31.4	-1.1	-0.78	76	38	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

Extraction Well	Date	Methane [%Vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
W-30	09/08/98	29.6	0.4	33.4	-29.0	-5 TO -15	74	60	
W-31	09/08/98	46.3	ND	34.6	-29.0	-19.3	89	40	
W-32	09/08/98	18.8	ND	24.9	-29.0	-0.61	104		
W-33	09/08/98	30.9	2.1	24.8	-23.5	-22.0	82	143	
W-36	09/08/98	40.2	ND	33.1	-22.0	-10.8	108	152	
W-37	09/08/98	24.2	5.7	27.6	-22.0	7.2	101	86	
W-37A	09/08/98	27.2	0.6	33.1	-4 TO -7	-0.27	108	12	
W-37B	09/08/98	28.8	1.4	36.8	-0.5 TO -4	-0.5 TO -2	118	16	
W-38	09/08/98	32.8	ND	31.5	-21.0	-1.4	72	0	
W-38A	09/08/98	30.2	4.5	24.8	-5 TO -10	-5 TO -10	78	152	
W-38B	09/08/98	NT	NT	NT	NT	NT	NT	0	
W-39	09/08/98	ND	19.1	1.8	-21.0	-1 TO -2	74	19	
W-40	09/08/98	ND	20.2	ND	-21.0	ND	74	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							123		
Minimum:							0		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

0789003.00

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
09/01/98	23.8	4.1	-35.0	12.6	738	1554	1145
09/08/98	23.4	4.5	-35.0	12.3	754	1559	1511
09/16/98	23.6	4.2	-35.0	12.5	759	1554	2141
09/22/98	23.7	4.1	-35.0	12.2	730	1545	1411
09/29/98	24.1	4.1	-36.0	11.5	675	1550	2150
=====	=====	=====	=====	=====	=====	=====	=====
Total:							8358
Minimum:						1545	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column

**SCS FIELD SERVICES, INC.**

April 6, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of March 1 through 31, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

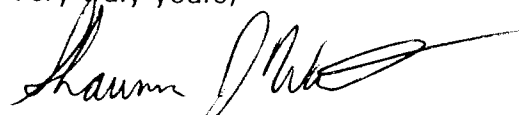
- No methane gas was detected at any of the monitoring wells tested. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 11,285 gallons as measured at the flare inlet flow meter.
- On March 3, 1998, SCS-FS troubleshoot problems with Sump Pump Nos. 1 and 6. Sump Pump No. 1 required replacement and Sump Pump No. 6 was repaired by removing restrictions in the discharge line and tightening fittings. Both sumps were restored to normal operation.



Mr. George Cosby  
April 6, 1998  
Page Two

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read "Shaunna J. Watterson", with a long, sweeping horizontal line extending to the right.

Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

## SCS FIELD SERVICES, INC.

April 6, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of March 1 through 31, 1998.

### Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



Mr. George Cosby  
April 6, 1998  
Page Two

#### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

#### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

#### Monitoring Well Testing

During the reporting period, no methane gas was detected at any of the LFG monitoring wells tested. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

#### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells (see Table 2) indicated that a significant number of wells exhibited an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 61 to 131 degrees Fahrenheit (see Table 2). These temperatures are in the normal to high range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

Mr. George Cosby  
April 6, 1998  
Page Four

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, no unscheduled shut-downs occurred.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1550 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 11,285 gallons as measured by the flare inlet flow meter.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

On March 3, 1998, SCS-FS troubleshoot problems with Sump Pump Nos. 1 and 6. Sump Pump No. 1 required replacement and Sump Pump No. 6 was repaired by removing a restriction in the discharge line and tightening fittings. Both sumps were restored to normal operation.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

Mr. George Cosby  
April 6, 1998  
Page Five

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. SCS-FS performed the quarterly observation with minor repairs of deficiencies completed as needed. The next quarterly site observation is scheduled to be conducted in April 1998.

#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

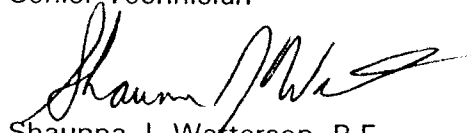
Mr. George Cosby  
April 6, 1998  
Page Six

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	03/03/98	ND	20.6	0.01	
	03/10/98	ND	20.4	ND	
	03/17/98	ND	20.6	ND	
	03/24/98	ND	18.9	0.03	
	03/31/98	ND	16.8	0.04	
1A	03/03/98	ND	18.8	0.05	
	03/10/98	ND	19.2	-0.03	
	03/17/98	ND	16.6	ND	
	03/24/98	ND	18.4	0.02	
	03/31/98	ND	16.8	0.04	
2	03/03/98	ND	19.7	0.03	
	03/10/98	ND	19.8	-0.02	
	03/17/98	ND	20.2	ND	
	03/24/98	ND	17.9	0.02	
	03/31/98	ND	19.9	ND	
2A	03/03/98	ND	18.1	0.02	
	03/10/98	ND	19.9	ND	
	03/17/98	ND	18.6	0.02	
	03/24/98	ND	18.8	0.02	
	03/31/98	ND	19.4	ND	
3B	03/03/98	ND	19.1	0.02	
	03/10/98	ND	19.6	ND	
	03/17/98	ND	19.1	ND	
	03/24/98	ND	13.3	0.02	
	03/31/98	ND	15.2	0.02	
4	03/03/98	ND	20.2	0.17	
	03/10/98	ND	19.7	ND	
	03/17/98	ND	19.1	0.06	
	03/24/98	ND	18.7	0.06	
	03/31/98	ND	19.3	0.03	
4A	03/03/98	ND	20.4	0.06	
	03/10/98	ND	19.6	ND	
	03/17/98	ND	18.6	0.01	
	03/24/98	ND	16.0	0.03	
	03/31/98	ND	20.4	ND	
5	03/03/98	ND	20.1	0.10	
	03/10/98	ND	18.6	ND	
	03/17/98	ND	20.2	0.02	
	03/24/98	ND	20.4	0.01	
	03/31/98	ND	20.4	0.06	
5A	03/03/98	ND	15.6	0.21	
	03/10/98	ND	19.9	ND	
	03/17/98	ND	19.9	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
5A	03/24/98	ND	19.8	0.03	
	03/31/98	ND	20.2	0.04	
6B	03/03/98	ND	18.7	0.26	
	03/10/98	ND	18.3	0.08	
	03/17/98	ND	18.1	0.06	
	03/24/98	ND	18.6	0.15	
	03/31/98	ND	18.7	0.13	
6C	03/03/98	ND	18.9	0.02	
	03/10/98	ND	18.1	0.02	
	03/17/98	ND	17.8	0.02	
	03/24/98	ND	17.8	0.01	
	03/31/98	ND	18.2	-0.02	
6D	03/03/98	ND	18.8	0.14	
	03/10/98	ND	18.7	0.04	
	03/17/98	ND	18.2	0.01	
	03/24/98	ND	18.7	0.05	
	03/31/98	ND	18.8	0.05	
7	03/03/98	ND	20.1	0.01	
	03/10/98	ND	20.4	0.01	PARTIALLY PLUGGED
	03/17/98	ND	20.2	ND	PARTIALLY PLUGGED
	03/24/98	ND	20.5	0.02	
	03/31/98	ND	20.4	0.14	
7A	03/03/98	ND	20.1	0.02	
	03/10/98	ND	20.2	0.02	
	03/17/98	ND	20.6	ND	
	03/24/98	ND	20.4	ND	
	03/31/98	ND	20.2	ND	
8A	03/03/98	ND	19.1	0.10	
	03/10/98	ND	18.2	0.02	
	03/17/98	ND	17.9	ND	
	03/24/98	ND	18.3	ND	
	03/31/98	ND	18.4	0.04	
9	03/03/98	ND	20.2	0.05	
	03/10/98	ND	18.4	-0.02	
	03/17/98	ND	18.2	-0.02	
	03/24/98	ND	13.3	0.01	
	03/31/98	ND	20.0	ND	
10	03/03/98	ND	19.9	0.09	
	03/10/98	ND	20.1	ND	
	03/17/98	ND	19.6	ND	
	03/24/98	ND	19.6	0.05	
	03/31/98	ND	20.0	0.12	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
10A	03/03/98	ND	20.3	0.06	
	03/10/98	ND	19.4	ND	
	03/17/98	ND	19.8	ND	
	03/24/98	ND	20.1	0.01	
	03/31/98	ND	20.4	ND	
11B	03/03/98	ND	20.4	0.03	
	03/10/98	ND	20.4	ND	
	03/17/98	ND	20.4	-0.02	
	03/24/98	ND	20.4	0.02	
	03/31/98	ND	20.4	0.01	
12B	03/03/98	ND	20.3	0.01	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	20.4	-0.01	
	03/24/98	ND	20.4	ND	
	03/31/98	ND	20.5	ND	
13B	03/03/98	ND	20.2	0.04	
	03/10/98	ND	20.2	-0.01	
	03/17/98	ND	20.3	ND	
	03/24/98	ND	20.4	0.02	
	03/31/98	ND	20.5	ND	
13D	03/03/98	ND	20.1	0.04	
	03/10/98	ND	20.3	ND	
	03/17/98	ND	20.1	ND	
	03/24/98	ND	20.4	0.01	
	03/31/98	ND	20.4	ND	
13C	03/03/98	ND	17.0	0.02	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	20.4	ND	
	03/24/98	ND	19.5	ND	
	03/31/98	ND	20.1	-0.01	
13X	03/03/98	ND	19.7	0.02	
	03/10/98	ND	20.2	N	
	03/17/98	ND	20.4	0.01	
	03/24/98	ND	20.3	0.02	
	03/31/98	ND	20.3	ND	
14B	03/03/98	ND	20.3	0.04	
	03/10/98	ND	20.8	1.20	PARTIALLY PLUGGED
	03/17/98	ND	20.3	0.14	PARTIALLY PLUGGED
	03/24/98	ND	19.5	ND	
	03/31/98	ND	20.4	0.06	
14C	03/03/98	ND	19.4	0.02	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	20.4	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
14C	03/24/98	ND	20.4	3.00	
	03/31/98	ND	20.1	0.03	
15A	03/03/98	ND	20.4	0.06	
	03/10/98	ND	20.4	1.00	PARTIALLY PLUGGED
	03/17/98	ND	20.4	0.07	PARTIALLY PLUGGED
	03/24/98	ND	20.2	1.20	
	03/31/98	ND	20.4	0.70	
16A	03/03/98	ND	7.2	0.04	
	03/10/98	ND	13.2	ND	
	03/17/98	ND	9.2	-0.02	
	03/24/98	ND	8.7	ND	
	03/31/98	ND	11.6	0.02	
16X	03/03/98	ND	20.2	0.01	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	19.1	-0.01	
	03/24/98	ND	18.1	0.02	
	03/31/98	ND	19.6	0.02	
17A	03/03/98	ND	13.3	0.08	
	03/10/98	ND	16.4	ND	
	03/17/98	ND	8.6	ND	
	03/24/98	ND	8.7	0.04	
	03/31/98	ND	13.8	0.04	
18B	03/03/98	ND	6.2	0.03	
	03/10/98	ND	18.7	0.02	
	03/17/98	ND	19.7	-0.02	
	03/24/98	ND	12.8	0.01	
	03/31/98	ND	17.2	ND	
19	03/03/98	ND	16.6	0.02	
	03/10/98	ND	19.3	0.02	
	03/17/98	ND	17.7	ND	
	03/24/98	ND	18.1	0.01	
	03/31/98	ND	20.0	0.01	
20	03/03/98	ND	18.0	0.04	
	03/10/98	ND	17.2	0.01	
	03/17/98	ND	17.6	ND	
	03/24/98	ND	18.1	ND	
	03/31/98	ND	18.1	0.02	
20A	03/03/98	ND	18.8	0.06	
	03/10/98	ND	18.8	0.02	
	03/17/98	ND	19.7	ND	
	03/24/98	ND	18.7	0.02	
	03/31/98	ND	18.0	0.04	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
22	03/03/98	ND	16.9	0.03	
	03/10/98	ND	17.3	ND	
	03/17/98	ND	18.3	ND	
	03/24/98	ND	17.8	ND	
	03/31/98	ND	18.2	0.01	
22A	03/03/98	ND	18.0	0.08	
	03/10/98	ND	19.5	0.01	
	03/17/98	ND	17.2	-0.02	
	03/24/98	ND	18.8	ND	
	03/31/98	ND	18.2	0.05	
23	03/03/98	ND	19.9	0.14	
	03/10/98	ND	19.4	0.04	
	03/17/98	ND	19.7	0.04	
	03/24/98	ND	20.0	0.29	
	03/31/98	ND	20.3	0.03	
24	03/03/98	ND	13.7	0.06	
	03/10/98	ND	20.2	-0.01	
	03/17/98	ND	20.1	-0.03	
	03/24/98	ND	20.4	ND	
	03/31/98	ND	20.2	ND	
24A	03/03/98	ND	17.8	0.06	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	20.4	-0.01	
	03/24/98	ND	19.5	ND	
	03/31/98	ND	20.1	-0.02	
25	03/03/98	ND	17.5	0.04	
	03/10/98	ND	20.1	-0.01	
	03/12/98	ND	20.4	ND	
	03/17/98	ND	20.1	ND	
	03/31/98	ND	20.3	ND	
25A	03/03/98	ND	17.8	0.08	
	03/10/98	ND	19.8	ND	
	03/17/98	ND	20.2	-0.02	
	03/24/98	ND	19.6	ND	
	03/31/98	ND	19.9	ND	
26	03/03/98	ND	18.4	0.05	
	03/10/98	ND	19.9	-0.01	
	03/17/98	ND	20.1	-0.02	
	03/24/98	ND	20.4	ND	
	03/31/98	ND	20.4	ND	
26A	03/03/98	ND	19.4	0.05	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	20.2	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26A	03/24/98	ND	20.4	ND	
	03/31/98	ND	20.3	ND	
26B	03/03/98	ND	19.0	0.04	
	03/10/98	ND	20.1	-0.01	
	03/17/98	ND	19.8	-0.01	
	03/24/98	ND	19.8	ND	
	03/31/98	ND	20.3	ND	
27	03/03/98	ND	17.4	0.02	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	20.6	-0.02	
	03/24/98	ND	20.4	ND	
	03/31/98	ND	20.4	-0.01	
27A	03/03/98	ND	18.8	0.04	
	03/10/98	ND	20.4	ND	
	03/17/98	ND	18.6	-0.02	
	03/24/98	ND	19.4	0.01	
	03/31/98	ND	19.4	-0.01	
28	03/03/98	ND	18.7	ND	
	03/10/98	ND	20.3	ND	
	03/17/98	ND	20.2	ND	
	03/24/98	ND	20.2	ND	
	03/31/98	ND	20.5	-0.02	
30A	03/03/98	ND	20.6	0.43	PARTIALLY PLUGGED
	03/10/98	ND	20.2	0.18	
	03/17/98	ND	20.6	0.04	PARTIALLY PLUGGED
	03/24/98	ND	19.8	0.10	
	03/31/98	ND	20.3	0.01	
31	03/03/98	ND	20.6	0.29	
	03/10/98	ND	20.4	0.08	
	03/17/98	ND	20.7	0.24	
	03/24/98	ND	20.4	0.02	
	03/31/98	ND	20.4	0.26	
31A	03/03/98	ND	19.8	0.53	
	03/10/98	ND	19.4	0.21	
	03/17/98	ND	20.1	0.16	
	03/24/98	ND	19.8	0.26	
	03/31/98	ND	20.3	ND	
32	03/03/98	ND	20.5	0.02	
	03/10/98	ND	20.6	0.01	
	03/17/98	ND	20.1	ND	
	03/24/98	ND	20.3	ND	
	03/31/98	ND	20.4	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	03/03/98	ND	19.9	ND	
	03/10/98	ND	20.4	ND	
	03/17/98	ND	20.4	ND	
	03/24/98	ND	20.4	ND	
	03/31/98	ND	20.3	-0.01	
33	03/03/98	ND	19.2	ND	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	19.8	ND	
	03/24/98	ND	19.0	ND	
	03/31/98	ND	19.3	ND	
34	03/03/98	ND	17.6	ND	
	03/10/98	ND	18.2	ND	
	03/17/98	ND	8.1	ND	
	03/24/98	NT	NT	NT	INACCESSIBLE; UNDER STACKED TIRES
	03/31/98	ND	15.3	-0.02	
35	03/03/98	ND	19.8	ND	
	03/10/98	ND	19.8	ND	
	03/17/98	ND	17.3	ND	
	03/24/98	ND	20.0	0.02	
	03/31/98	ND	20.3	ND	
36B	03/03/98	ND	14.9	0.03	
	03/10/98	ND	14.8	-0.02	
	03/17/98	ND	20.1	ND	
	03/24/98	ND	16.0	0.03	
	03/31/98	ND	19.6	-0.05	
37	03/03/98	ND	18.6	0.01	
	03/10/98	ND	19.9	-0.02	
	03/17/98	ND	17.3	ND	
	03/24/98	ND	18.7	0.01	
	03/31/98	ND	20.3	ND	
38	03/03/98	ND	19.8	0.18	
	03/10/98	ND	20.2	-0.08	
	03/17/98	ND	14.2	-0.03	
	03/24/98	ND	19.1	0.02	
	03/31/98	ND	20.4	-0.03	
39	03/03/98	ND	20.2	1.20	
	03/10/98	ND	20.6	0.08	
	03/17/98	ND	20.8	-0.52	
	03/24/98	NT	NT	NT	
	03/31/98	ND	20.4	0.11	
40	03/03/98	ND	20.4	0.01	
	03/10/98	ND	20.3	ND	
	03/17/98	ND	20.3	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
40	03/24/98	ND	20.0	0.01	
	03/31/98	ND	20.3	ND	
41	03/03/98	ND	20.2	0.04	
	03/10/98	ND	20.4	0.01	
	03/17/98	ND	19.8	ND	
	03/24/98	ND	18.9	0.02	
	03/31/98	ND	19.6	0.01	
42	03/03/98	ND	19.1	0.01	
	03/10/98	ND	19.7	ND	
	03/17/98	ND	18.2	ND	
	03/24/98	ND	19.5	ND	
	03/31/98	ND	19.6	0.02	
43	03/03/98	ND	14.2	0.08	
	03/10/98	ND	17.8	-0.04	
	03/17/98	ND	14.2	-0.02	
	03/24/98	ND	18.4	0.03	
	03/31/98	ND	20.1	-0.02	
45	03/03/98	ND	19.5	0.09	
	03/10/98	ND	19.2	-0.02	
	03/17/98	ND	20.6	-0.02	
	03/24/98	ND	18.2	0.04	
	03/31/98	ND	20.2	-0.01	
46	03/03/98	ND	19.3	ND	
	03/10/98	ND	NT	0.01	
	03/17/98	ND	19.7	0.02	
	03/24/98	ND	18.8	0.01	
	03/31/98	ND	19.2	ND	
1B'	03/03/98	ND	20.1	0.08	
	03/10/98	ND	20.1	0.03	
	03/17/98	ND	19.8	ND	
	03/24/98	ND	18.8	0.05	
	03/31/98	ND	20.2	0.01	
1C'	03/03/98	ND	19.7	0.05	
	03/10/98	ND	20.2	0.04	
	03/17/98	ND	18.4	ND	
	03/24/98	ND	19.1	0.02	
	03/31/98	ND	19.0	ND	
2B'	03/03/98	ND	19.6	0.06	
	03/10/98	ND	20.0	ND	
	03/17/98	ND	18.9	ND	
	03/24/98	ND	19.0	0.01	
	03/31/98	ND	18.4	0.05	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
2C'	03/03/98	ND	16.1	0.04	
	03/10/98	ND	20.1	ND	
	03/17/98	ND	20.1	-0.01	
	03/24/98	ND	19.5	0.03	
	03/31/98	ND	20.4	0.05	
3B'	03/03/98	ND	18.0	0.01	
	03/10/98	ND	20.1	ND	
	03/17/98	ND	20.2	ND	
	03/24/98	ND	17.6	0.02	
	03/31/98	ND	20.4	0.04	
3C'	03/03/98	ND	17.1	0.05	
	03/10/98	ND	19.4	ND	
	03/17/98	ND	19.9	ND	
	03/24/98	ND	13.8	0.04	
	03/31/98	ND	20.1	0.05	
4B'	03/03/98	ND	20.4	0.10	
	03/10/98	ND	19.8	0.01	
	03/17/98	ND	20.1	-0.01	
	03/24/98	ND	14.3	0.03	
	03/31/98	ND	11.4	0.04	
4C'	03/03/98	ND	10.1	0.04	
	03/10/98	ND	19.2	ND	
	03/17/98	ND	15.7	-0.01	
	03/24/98	ND	9.2	0.02	
	03/31/98	ND	12.2	0.03	
5B'	03/03/98	ND	18.0	0.11	
	03/10/98	ND	18.3	ND	
	03/17/98	ND	20.3	-0.03	
	03/24/98	ND	10.7	0.02	
	03/31/98	ND	11.5	0.05	
5C'	03/03/98	ND	20.4	0.06	
	03/10/98	ND	19.7	ND	
	03/17/98	ND	20.2	-0.02	
	03/24/98	ND	20.4	0.01	
	03/31/98	ND	18.7	0.05	
6B'	03/03/98	ND	16.3	0.05	
	03/10/98	ND	18.4	ND	
	03/17/98	ND	17.8	-0.01	
	03/24/98	ND	18.2	0.01	
	03/31/98	ND	19.1	0.06	
6C'	03/03/98	ND	14.3	0.05	
	03/10/98	ND	20.2	ND	
	03/17/98	ND	20.1	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C'	03/24/98	ND	17.1	0.02	
	03/31/98	ND	16.9	0.04	
7B'	03/03/98	ND	13.3	0.02	
	03/10/98	ND	18.2	ND	
	03/17/98	ND	16.2	-0.01	
	03/24/98	ND	17.3	0.01	
	03/31/98	ND	19.1	0.01	
7C'	03/03/98	ND	14.1	0.02	
	03/10/98	ND	18.7	ND	
	03/17/98	ND	17.3	-0.01	
	03/24/98	ND	16.8	-0.01	
	03/31/98	ND	18.9	-0.02	
8B'	03/03/98	ND	17.2	0.10	
	03/10/98	ND	20.3	0.01	
	03/17/98	ND	20.1	ND	
	03/24/98	ND	16.7	0.04	
	03/31/98	ND	18.9	0.06	
8C'	03/03/98	ND	16.0	0.04	
	03/10/98	ND	20.4	0.01	
	03/17/98	ND	19.2	ND	
	03/24/98	ND	19.8	0.02	
	03/31/98	ND	20.3	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/17/98	P-1	ND	18.9	0.8	-0.15	0.01	63	0	
03/17/98	P-2	ND	19.3	1.6	-0.15	ND	64	0	
03/17/98	P-3	ND	16.4	2.8	-0.17	0.01	63	0	
03/17/98	P-4	ND	20.2	ND	-0.17	ND	63	0	
03/17/98	P-5	ND	13.4	8.8	-0.17	ND	64	0	
03/17/98	P-6	ND	16.4	4.7	-0.17	ND	64	0	
03/17/98	P-7	ND	20.2	ND	-0.17	ND	63	0	
03/17/98	P-10	ND	7.8	14.2	-0.20	-0.03	78	2	
03/17/98	P-11	ND	20.1	ND	-0.20	ND	63	0	
03/17/98	P-13	ND	14.3	4.7	-0.20	ND	62	0	
03/17/98	P-14	ND	18.8	1.2	-0.20	0.01	64	0	
03/17/98	P-15	ND	19.6	1.6	-0.20	ND	63	0	
03/17/98	P-16	ND	13.0	6.1	-0.22	ND	64	0	
03/10/98	P-17	ND	14.6	4.8	-0.22	ND	64	0	
03/10/98	P-18	ND	13.6	6.2	-0.22	ND	63	0	
03/10/98	P-19	ND	12.4	7.1	-0.22	-0.02	76	2	
03/10/98	P-20	ND	16.4	2.0	-0.22	-0.01	64	1	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/10/98	P-21	ND	14.0	5.7	-0.22	-0.04	82	4	
03/10/98	P-22	ND	20.4	ND	-0.22	ND	64	0	
03/10/98	P-23	4.2	9.7	9.8	-0.26	-0.23	108	NT	
03/10/98	P-24	9.0	6.8	16.6	-0.26	-0.11	111	NT	
03/10/98	P-25	5.6	10.9	11.5	-0.26	-0.16	107	NT	
03/10/98	P-26	ND	20.6	ND	-0.26	ND	68	0	
03/10/98	P-27	ND	19.3	1.6	-0.28	ND	69	0	
03/10/98	P-28	8.7	3.4	22.1	-0.24	-0.14	131	NT	
03/10/98	P-29	1.8	12.9	8.1	-0.24	-0.10	108	NT	
03/10/98	P-30	2.4	9.2	11.8	-0.24	-0.14	111	NT	
03/10/98	P-31	ND	19.4	1.4	-0.24	0.12	89	2	
03/10/98	P-32	ND	18.2	1.6	-0.24	0.06	87	1	
03/10/98	P-33	ND	17.1	3.7	-0.22	0.09	85	1	
03/10/98	P-34	ND	17.0	2.0	-0.22	0.09	81	1	
03/10/98	P-35	3.5	11.4	10.0	-0.22	-0.02	102	2	
03/10/98	P-36	ND	13.3	5.8	-0.22	0.10	86	1	
03/10/98	P-37	ND	19.7	ND	-0.18	ND	85	0	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0.89003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/10/98	P-38	ND	8.4	4.7	-0.18	0.08	83	1	
03/10/98	P-39	ND	20.4	ND	-0.18	ND	89	0	
03/17/98	W-1	11.8	0.4	26.4	-1.20	-0.62	64	NT	ADJUSTED TO -0.38
03/17/98	W-2	8.2	0.8	24.8	NT	-0.04	63	NT	
03/17/98	W-3	24.8	3.4	26.7	NT	-0.24	64	NT	
03/17/98	W-4	26.8	0.4	31.8	NT	-0.51	64	NT	
03/17/98	W-5	ND	14.9	3.9	NT	-0.86	61	NT	
03/17/98	W-6	14.4	0.8	27.6	-1.20	-0.17	63	NT	
03/17/98	W-7	34.9	2.8	28.1	-1.20	-1.10	67	NT	
03/17/98	W-8	19.3	0.8	28.6	NT	-0.04	63	NT	
03/17/98	W-9	16.2	0.4	27.4	NT	-0.22	64	NT	
03/17/98	W-10	16.7	0.3	27.1	-1.30	-0.24	64	NT	
03/17/98	W-11	15.6	0.4	26.3	NT	-0.22	64	NT	
03/17/98	W-12	27.2	0.6	29.8	NT	-0.14	63	NT	
03/17/98	W-13	12.1	1.1	25.1	NT	-0.17	64	NT	
03/17/98	W-14	8.7	3.6	14.4	-1.30	-0.20	72	NT	
03/17/98	W-15	ND	16.2	1.4	-1.30	-0.08	71	NT	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/17/98	W-16	23.7	1.3	30.8	-1.40	-0.22	84	38	
03/17/98	W-17	27.1	1.7	30.7	-1.40	-1.10	74	76	
03/17/98	W-18	19.7	1.1	22.4	-1.40	-0.18	76	29	
03/17/98	W-20	24.3	0.9	31.4	-1.20	-0.28	78	38	
03/10/98	W-21	33.9	1.3	34.6	-1.40	-1.20	96	36	
03/10/98	W-23	27.1	1.5	28.3	-31.0	-2.50	74	86	
03/10/98	W-24	39.0	2.0	34.4	-29.0	-0.28	81	19	
03/10/98	W-25	46.2	2.8	34.8	-29.0	-27.4	84	76	
03/10/98	W-26	4.9	7.7	13.1	-29.0	-0.80	84	29	
03/10/98	W-27	49.6	0.9	30.9	-31.0	-3.00	76	209	
03/10/98	W-28	NT	NT	NT	NT	NT	NT	NT	INACCESSIBLE; UNDER VEHICLE
03/10/98	W-28A	25.1	1.0	30.2	-29.0	-2.60	112	40	
03/10/98	W-28B	39.9	1.1	38.9	-29.0	-0.48	86	38	
03/10/98	W-29	30.2	1.2	31.6	-20.0	-1.40	74	NT	
03/10/98	W-29A	19.2	1.1	28.7	-0.22	-0.14	72	10	
03/10/98	W-30	31.2	2.8	28.4	-29.0	-11.0	78	80	
03/10/98	W-31	47.2	1.8	38.6	-29.0	-26.5	84	44	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
03/10/98	W-32	29.1	0.8	32.6	-29.0	0.08	85	4	ADJUSTED TO -0.40
03/10/98	W-33	30.1	2.4	31.4	-29.5	-26.8	83	13	
03/10/98	W-36	33.6	1.4	31.4	-27.0	-10.2	103	162	
03/10/98	W-37	21.4	5.6	23.8	-27.0	-9.00	83	114	ADJUSTED TO -7.00
03/10/98	W-37A	12.6	1.4	19.3	-7.50	-0.18	104	12	
03/10/98	W-37B	6.4	3.1	20.2	-0.12	-0.90	93	4	
03/10/98	W-38	22.1	2.8	26.4	-21.0	-2.30	70	NT	
03/10/98	W-38A	28.8	4.4	27.6	-10.0	-10.0	76	NT	
03/10/98	W-38B	28.9	1.4	25.6	-0.18	-0.18	82	19	
03/10/98	W-39	ND	20.4	0.4	-21.0	-0.90	68	10	
03/10/98	W-40	ND	20.6	ND	-19.0	ND	63	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							131		
Minimum:							61		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
03/03/98	25.4	2.9	-36.3	8.70	569	1553	2095
03/10/98	23.8	3.2	-35.0	10.0	550	1550	1934
03/17/98	25.1	2.7	-38.0	9.00	600	1550	1453
03/24/98	25.3	2.9	-37.0	10.8	638	1557	2252
03/31/98	24.4	3.2	-35.0	10.3	658	1551	3561
=====	=====	=====	=====	=====	=====	=====	=====
Total:							11295
Minimum:						1550	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column

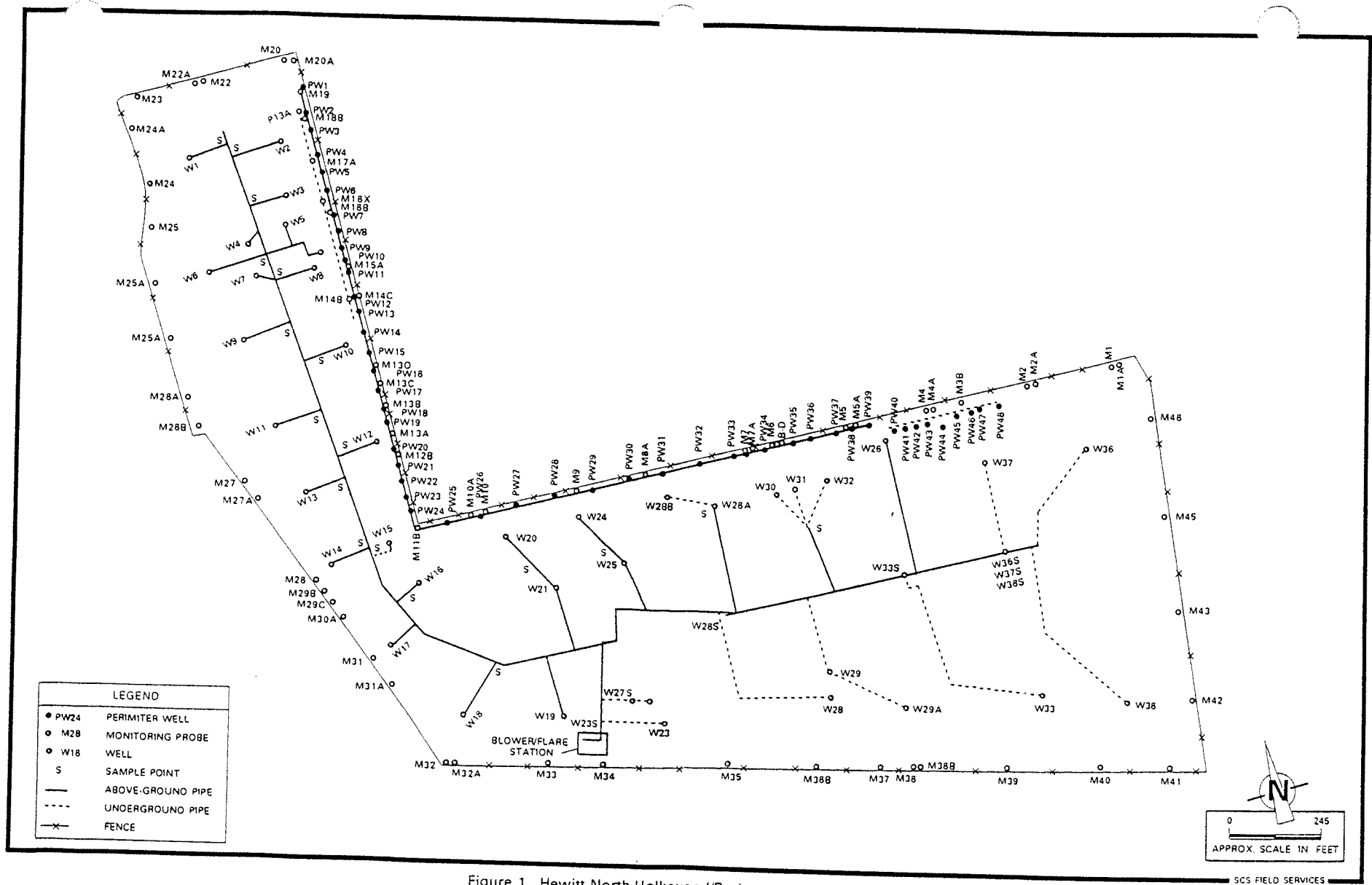


Figure 1. Hewitt North Hollywood/Probes and Well Field.

**SCS FIELD SERVICES, INC.**

May 27, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of April 1 through 30, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected at any of the monitoring wells tested. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the last three weeks of the month was approximately 7,377 gallons as measured at the flare inlet flow meter.
- On April 9, 1998, SCS-FS sampled the gas at the inlet to the flare to determine sulfur content for the South Coast Air Quality Management District (AQMD). SCS-FS forwarded a letter to AQMD dated April 27, 1998 requesting exemption from Rule 431.1.



Mr. George Cosby  
May 27, 1998  
Page Two

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read "Shaunna J. Watterson", with a long, sweeping horizontal line extending to the right.

Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

**SCS FIELD SERVICES, INC.**

May 27, 1998

File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of April 1 through 30, 1998.

Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, no methane gas was detected at any of the LFG monitoring wells tested. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The second round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

Mr. George Cosby  
May 27, 1998  
Page Three

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells indicated that a significant number of wells exhibited an overpull condition. However, due to misplaced data we are unable to report actual extraction well data. This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The result of this survey indicated subsurface temperatures are in the normal to high range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, no unscheduled shut-downs occurred.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1550 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the last three weeks of the month was approximately 7,377 gallons as measured by the flare inlet flow meter.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

Mr. George Cosby  
May 27, 1998  
Page Five

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. SCS-FS performed the quarterly observation on April 14, 1998 with minor repairs of deficiencies completed as needed. The next quarterly site observation is scheduled to be conducted in July 1998.

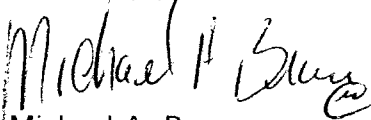
#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

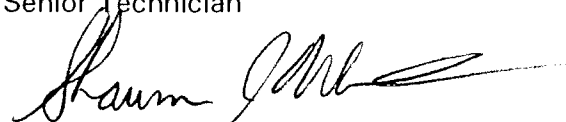
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.0	ND	
	04/28/98	ND	19.3	ND	
1A	04/14/98	ND	16.1	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.1	ND	
2	04/14/98	ND	19.4	ND	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.3	ND	
2A	04/14/98	ND	19.7	ND	
	04/21/98	ND	20.0	0.01	
	04/28/98	ND	18.6	ND	
3B	04/14/98	ND	20.4	0.02	
	04/21/98	ND	11.8	ND	
	04/28/98	ND	20.5	ND	
4	04/14/98	ND	20.0	ND	
	04/21/98	ND	20.0	0.06	
	04/28/98	ND	19.7	ND	PARTIALLY PLUGGED
4A	04/14/98	ND	18.4	0.01	
	04/21/98	ND	20.0	0.01	
	04/28/98	ND	19.2	ND	
5	04/14/98	ND	20.4	-0.08	
	04/21/98	ND	20.2	0.02	
	04/28/98	ND	19.9	0.01	
5A	04/14/98	ND	20.1	0.04	PARTIALLY PLUGGED
	04/21/98	ND	20.1	0.01	
	04/28/98	ND	20.4	0.21	
6B	04/14/98	ND	18.3	-0.04	
	04/21/98	ND	20.1	0.01	
	04/28/98	ND	13.9	ND	
6C	04/14/98	ND	17.8	ND	
	04/21/98	ND	19.4	ND	
	04/28/98	ND	17.1	ND	
6D	04/14/98	ND	19.1	-0.04	
	04/21/98	ND	20.0	ND	
	04/28/98	ND	18.5	0.02	
7	04/14/98	ND	20.6	0.02	PARTLY PULLED
	04/21/98	ND	20.4	0.10	PARTIALLY PLUGGED
	04/28/98	ND	20.2	0.03	PARTIALLY PLUGGED

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
7A	04/14/98	ND	20.2	ND	
	04/21/98	ND	20.0	0.01	
	04/28/98	ND	19.9	-0.01	
8A	04/14/98	ND	17.9	-0.04	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	17.0	-0.02	
9	04/14/98	ND	20.6	-0.08	
	04/21/98	ND	20.5	ND	
	04/28/98	ND	20.7	-0.03	
10	04/14/98	ND	19.8	-0.04	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	19.9	-0.11	
10A	04/14/98	ND	20.2	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.0	0.01	
11B	04/14/98	ND	20.6	-0.04	
	04/21/98	ND	20.5	ND	
	04/28/98	ND	20.3	-0.02	
12B	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.6	-0.02	
13B	04/14/98	ND	20.5	-0.02	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.7	-0.01	
13D	04/14/98	ND	20.4	-0.03	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	15.5	-0.01	
13C	04/14/98	ND	20.3	-0.01	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.2	ND	
13X	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.6	0.01	
14B	04/14/98	ND	20.6	0.04	PARTLLY PLULLED
	04/21/98	ND	20.4	0.20	PARTIALLY PLUGGED
	04/28/98	ND	20.8	ND	
14C	04/14/98	ND	20.3	ND	
	04/21/98	ND	19.2	0.02	
	04/28/98	ND	20.5	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
15A	04/14/98	ND	20.6	0.03	PARTIALLY PULLED
	04/21/98	ND	20.4	0.12	PARTIALLY PLUGGED
	04/28/98	NT	NT	NT	PLUGGED
16A	04/14/98	ND	20.4	ND	
	04/21/98	ND	10.6	0.01	
	04/28/98	ND	10.5	ND	
16X	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	20.0	0.01	
17A	04/14/98	ND	10.1	ND	
	04/21/98	ND	12.0	ND	
	04/28/98	ND	12.5	0.04	
18B	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	17.7	0.01	
	04/28/98	ND	13.6	ND	
19	04/14/98	ND	19.6	-0.01	
	04/21/98	ND	18.9	0.02	
	04/28/98	ND	19.4	ND	
20	04/14/98	ND	17.9	0.02	
	04/21/98	ND	18.4	0.01	
	04/28/98	ND	18.1	ND	
20A	04/14/98	ND	20.1	0.02	
	04/21/98	ND	17.9	0.01	
	04/28/98	ND	16.6	ND	
22	04/14/98	ND	20.2	0.02	
	04/21/98	ND	18.6	0.01	
	04/28/98	ND	17.9	0.01	
22A	04/14/98	ND	19.7	ND	
	04/21/98	ND	18.8	0.02	
	04/28/98	ND	18.6	0.31	PARTIALLY PLUGGED
23	04/14/98	ND	20.3	0.04	
	04/21/98	ND	20.1	0.06	PARTIALLY PLUGGED
	04/28/98	ND	20.5	0.34	PARTIALLY PLUGGED
24	04/14/98	ND	20.2	-0.02	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.4	ND	
24A	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	19.6	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
25	04/14/98	ND	20.3	-0.01	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	16.7	ND	
25A	04/14/98	ND	20.5	-0.02	
	04/21/98	ND	19.8	0.01	
	04/28/98	ND	14.2	ND	
26	04/14/98	ND	20.4	-0.01	
	04/21/98	ND	19.8	0.01	
	04/28/98	ND	19.7	0.01	
26A	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	20.0	0.03	
26B	04/14/98	ND	20.2	-0.01	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.3	ND	
27	04/14/98	ND	20.2	ND	
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	19.9	ND	
27A	04/14/98	ND	19.6	ND	
	04/21/98	ND	20.2	0.01	
	04/28/98	ND	19.7	ND	
28	04/14/98	ND	20.6	-0.01	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	20.2	ND	
30A	04/14/98	ND	20.1	0.04	
	04/21/98	ND	20.4	0.02	PARTIALLY PLUGGED
	04/28/98	ND	20.1	0.04	PARTIALLY PLUGGED
31	04/14/98	ND	20.6	0.06	
	04/21/98	ND	20.4	0.10	PARTIALLY PLUGGED
	04/28/98	ND	19.9	0.03	
31A	04/14/98	ND	18.2	0.72	
	04/21/98	ND	20.4	0.18	PARTIALLY PLUGGED
	04/28/98	ND	17.6	0.02	
32	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	28.5	0.01	
32A	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.4	-0.01	
	04/28/98	ND	20.2	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
33	04/14/98	ND	19.6	ND	PARTIALLY PLUGGED
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	20.1	ND	
34	04/14/98	ND	16.3	-0.01	
	04/21/98	ND	19.1	0.01	
	04/28/98	ND	19.9	0.01	
35	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.5	ND	
36B	04/14/98	ND	19.1	ND	
	04/21/98	ND	18.8	-0.01	
	04/28/98	ND	19.3	ND	
37	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.9	ND	
38	04/14/98	ND	18.2	-0.04	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	20.8	ND	
39	04/14/98	ND	20.4	0.04	
	04/21/98	ND	20.4	0.11	
	04/28/98	ND	19.6	0.10	
40	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	19.8	ND	
41	04/14/98	ND	19.7	0.01	
	04/21/98	ND	19.8	ND	
	04/28/98	ND	19.1	0.01	
42	04/14/98	ND	19.7	-0.01	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.3	ND	
43	04/14/98	ND	12.2	-0.02	
	04/21/98	ND	20.1	-0.02	
	04/28/98	ND	14.5	0.02	
45	04/14/98	ND	20.3	-0.02	
	04/21/98	ND	20.0	-0.01	
	04/28/98	ND	18.9	0.01	
46	04/14/98	ND	20.2	0.02	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	20.7	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1B'	04/14/98	ND	20.4	-0.02	
	04/21/98	ND	20.4	ND	
	04/28/98	ND	18.9	ND	
1C'	04/14/98	ND	19.8	-0.01	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	20.6	ND	
2B'	04/14/98	ND	18.9	ND	
	04/21/98	ND	20.3	0.01	
	04/28/98	ND	20.2	ND	
2C'	04/14/98	ND	20.3	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	20.5	0.01	
3B'	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	20.6	0.03	
3C'	04/14/98	ND	20.6	ND	
	04/21/98	ND	19.3	0.01	
	04/28/98	ND	20.0	0.05	
4B'	04/14/98	ND	20.6	ND	
	04/21/98	ND	20.4	0.01	
	04/28/98	ND	17.3	ND	
4C'	04/14/98	ND	19.4	ND	
	04/21/98	ND	20.2	ND	
	04/28/98	ND	16.9	0.01	
5B'	04/14/98	ND	13.7	-0.01	
	04/21/98	ND	19.8	0.01	
	04/28/98	ND	16.4	0.03	
5C'	04/14/98	ND	20.3	-0.01	
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	17.4	0.03	
6B'	04/14/98	ND	20.6	ND	
	04/21/98	ND	19.4	0.01	
	04/28/98	ND	19.9	ND	
6C'	04/14/98	ND	20.4	-0.01	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	19.5	ND	
7B'	04/14/98	ND	20.4	ND	
	04/21/98	ND	20.1	ND	
	04/28/98	ND	15.5	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
7C'	04/14/98	ND	18.1	ND	
	04/21/98	ND	20.0	ND	
	04/28/98	ND	16.2	0.01	
8B'	04/14/98	ND	20.6	-0.02	
	04/21/98	ND	20.3	ND	
	04/28/98	ND	20.7	ND	
8C'	04/14/98	ND	20.6	-0.01	
	04/21/98	ND	19.9	0.01	
	04/28/98	ND	20.5	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 3  
HEWITT PIT. Flare Station Data

0789003.00

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
04/14/98	25.8	2.4	-34.0	10.1	625	1550	3026
04/21/98	27.9	2.2	-36.0	10.2	600	1550	2006
04/28/98	25.2	2.6	-37.1	9.50	614	1556	2345
=====	=====	=====	=====	=====	=====	=====	=====
Total:							7377
Minimum:						1550	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column

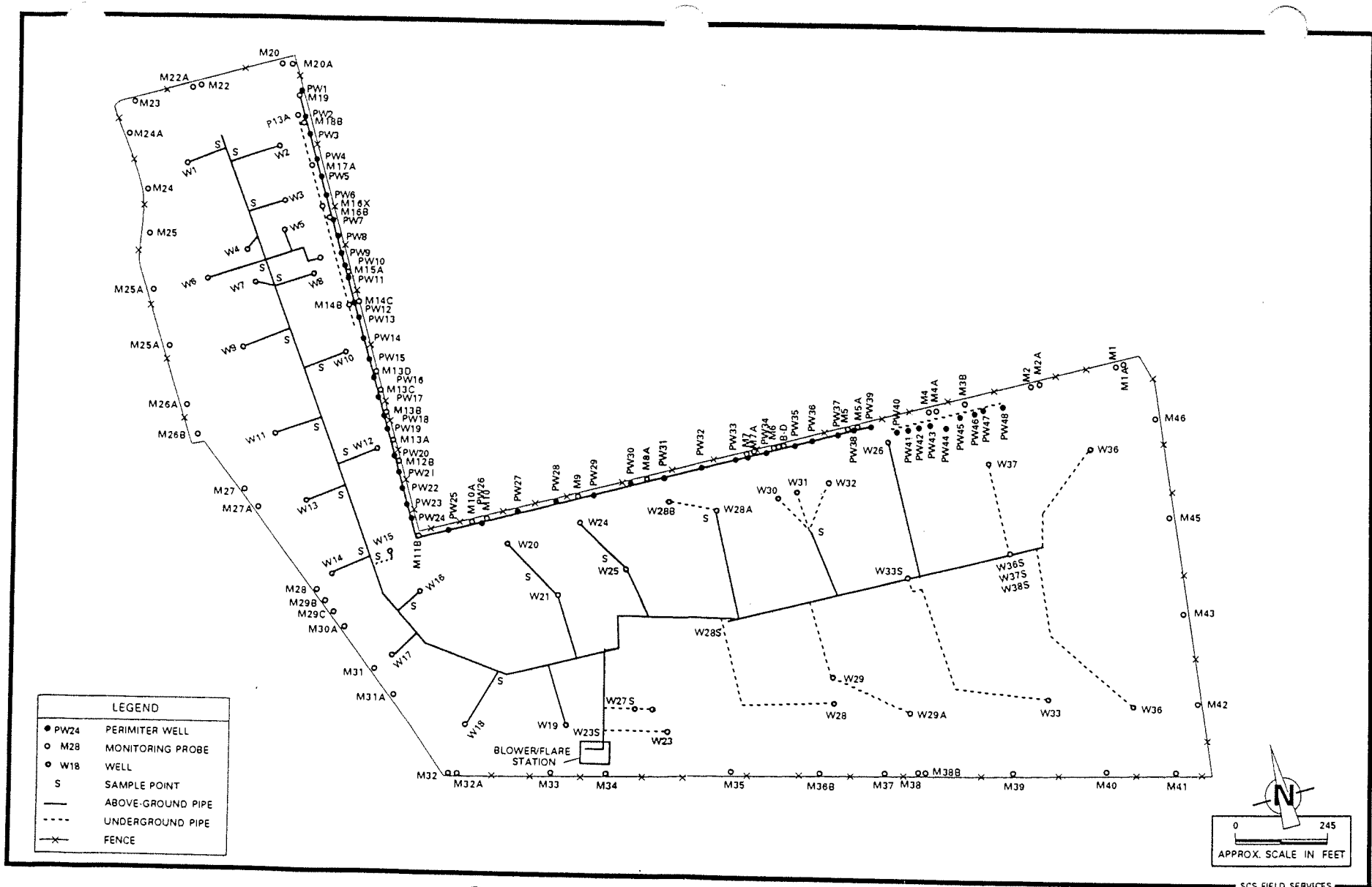


Figure 1. Hewitt North Hollywood/Probes and Well Field.

**SCS FIELD SERVICES, INC.**

June 30, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of May 1 through 31, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected at any of the monitoring wells tested. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 10,950 gallons as measured at the flare inlet flow meter.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003



**SCS FIELD SERVICES, INC.**

June 30, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of May 1 through 31, 1998.

Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, no methane gas was detected at any of the LFG monitoring wells tested with the exception of Monitoring Probe No. 38. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration. At the end of the reporting period, no methane gas was detected at Monitoring Probe No. 38.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells indicated that a significant number of wells exhibited an overpull condition. This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The temperatures ranged from 60 to 121 degrees Fahrenheit. The result of this survey indicated subsurface temperatures are in the normal to high range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

Mr. George Cosby  
June 30, 1998  
Page Four

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, no unscheduled shut-downs occurred.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1538 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 10,950 gallons as measured by the flare inlet flow meter.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

Mr. George Cosby  
June 30, 1998  
Page Five

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. The next quarterly site observation is scheduled to be conducted in July 1998.

#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	05/05/98	ND	13.3	ND	
	05/12/98	ND	18.3	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	17.1	ND	
1A	05/05/98	ND	14.1	ND	
	05/12/98	ND	18.4	ND	
	05/19/98	ND	18.5	-0.02	
	05/26/98	ND	18.9	ND	
2	05/05/98	ND	17.0	ND	
	05/12/98	ND	14.4	ND	
	05/19/98	ND	20.0	-0.01	
	05/26/98	ND	18.4	ND	
2A	05/05/98	ND	15.9	-0.01	
	05/12/98	ND	13.3	0.01	
	05/19/98	ND	20.1	0.02	
	05/26/98	ND	17.5	0.01	
3B	05/05/98	ND	15.1	ND	
	05/12/98	ND	10.9	0.01	
	05/19/98	ND	15.2	0.01	
	05/26/98	ND	13.9	ND	
4	05/05/98	ND	20.0	ND	
	05/12/98	ND	18.7	0.02	
	05/19/98	ND	18.7	0.01	
	05/26/98	ND	19.4	0.01	
4A	05/05/98	ND	16.7	0.01	
	05/12/98	ND	17.3	0.03	
	05/19/98	ND	19.2	ND	
	05/26/98	ND	20.0	ND	
5	05/05/98	ND	17.9	ND	
	05/12/98	ND	16.2	0.04	
	05/19/98	ND	19.9	0.01	
	05/26/98	ND	17.9	ND	
5A	05/05/98	ND	20.4	0.10	
	05/12/98	ND	19.9	ND	
	05/19/98	ND	20.4	0.02	
	05/26/98	ND	20.4	0.01	
6B	05/05/98	ND	18.0	0.01	
	05/12/98	ND	18.8	0.11	
	05/19/98	ND	17.7	-0.02	
	05/26/98	ND	18.8	ND	
6C	05/05/98	ND	17.7	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C	05/12/98	ND	17.3	ND	
	05/19/98	ND	17.3	-0.01	
	05/26/98	ND	17.6	ND	
6D	05/05/98	ND	19.2	-0.03	
	05/12/98	ND	18.8	0.02	
	05/19/98	ND	19.5	-0.02	
	05/26/98	ND	19.4	ND	
7	05/05/98	NT	NT	NT	PLUGGED
	05/12/98	ND	20.2	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.7	ND	
7A	05/05/98	ND	20.1	ND	
	05/12/98	ND	20.5	ND	
	05/19/98	ND	20.3	0.01	
	05/26/98	ND	20.3	ND	
8A	05/05/98	ND	17.5	ND	
	05/12/98	ND	20.3	ND	
	05/19/98	ND	20.1	0.03	
	05/26/98	ND	19.0	ND	
9	05/05/98	0.2	18.3	-0.06	
	05/12/98	ND	18.9	-0.02	
	05/19/98	ND	20.4	-0.02	
	05/26/98	ND	20.8	-0.02	
10	05/05/98	ND	18.6	-0.06	
	05/12/98	ND	19.9	ND	
	05/19/98	ND	20.0	ND	
	05/26/98	ND	20.6	ND	
10A	05/05/98	ND	20.3	-0.04	
	05/12/98	ND	20.2	ND	
	05/19/98	ND	20.4	-0.01	
	05/26/98	ND	20.3	ND	
11B	05/05/98	ND	20.8	-0.08	
	05/12/98	ND	20.5	ND	
	05/19/98	ND	20.5	ND	
	05/26/98	ND	20.5	-0.04	
12B	05/05/98	ND	20.7	-0.07	
	05/12/98	ND	20.1	ND	
	05/19/98	ND	20.5	ND	
	05/26/98	ND	20.7	ND	
13B	05/05/98	ND	19.4	-0.04	
	05/12/98	ND	19.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
13B	05/19/98	ND	20.4	-0.01	
	05/26/98	ND	20.7	-0.02	
13D	05/05/98	ND	20.7	-0.03	
	05/12/98	ND	19.2	0.01	
	05/19/98	ND	20.5	-0.04	
	05/26/98	ND	20.8	-0.02	
13C	05/05/98	ND	20.2	-0.02	
	05/12/98	ND	20.5	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.6	-0.01	
13X	05/05/98	ND	20.6	-0.01	
	05/12/98	ND	19.4	0.01	
	05/19/98	ND	19.8	0.01	
	05/26/98	ND	20.8	ND	
14B	05/05/98	NT	NT	NT	PLUGGED
	05/12/98	ND	19.3	ND	
	05/19/98	ND	20.4	1.1	
	05/26/98	ND	20.8	ND	
14C	05/05/98	ND	15.3	ND	
	05/12/98	ND	18.9	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.3	ND	
15A	05/05/98	NT	NT	NT	PLUGGED
	05/12/98	ND	20.6	0.03	
	05/19/98	ND	20.3	0.01	
	05/26/98	ND	20.5	0.01	
16A	05/05/98	ND	13.4	ND	
	05/12/98	ND	15.5	0.02	
	05/19/98	ND	14.0	-0.02	
	05/26/98	ND	14.0	-0.01	
16X	05/05/98	ND	19.5	-0.02	PARTIALLY PLUGGED
	05/12/98	ND	19.2	-0.01	
	05/19/98	ND	19.9	ND	
	05/26/98	ND	20.6	0.01	
17A	05/05/98	ND	12.8	-0.02	
	05/12/98	ND	15.8	0.02	
	05/19/98	ND	13.7	ND	
	05/26/98	ND	17.4	ND	
18B	05/05/98	ND	14.3	-0.02	
	05/12/98	ND	20.1	ND	
	05/19/98	ND	18.0	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
18B	05/26/98	ND	20.7	0.02	
19	05/05/98	ND	19.0	0.01	
	05/12/98	ND	19.1	ND	
	05/19/98	ND	20.1	ND	
	05/26/98	ND	19.5	ND	
20	05/05/98	ND	18.0	ND	
	05/12/98	ND	15.3	0.01	
	05/19/98	ND	17.3	-0.01	
	05/26/98	ND	18.4	0.02	
20A	05/05/98	ND	17.3	ND	
	05/12/98	ND	19.8	0.04	
	05/19/98	ND	18.0	-0.01	
	05/26/98	ND	18.9	0.04	
22	05/05/98	ND	20.1	ND	
	05/12/98	ND	20.4	0.03	
	05/19/98	ND	18.9	0.02	
	05/26/98	ND	20.3	0.01	
22A	05/05/98	ND	20.6	ND	
	05/12/98	ND	19.9	0.02	
	05/19/98	ND	18.3	0.06	
	05/26/98	ND	20.6	0.02	
23	05/05/98	ND	20.5	0.01	
	05/12/98	ND	20.2	ND	
	05/19/98	ND	20.4	1.3	
	05/26/98	ND	20.6	ND	
24	05/05/98	ND	19.3	-0.04	
	05/12/98	ND	18.2	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.0	ND	
24A	05/05/98	ND	20.3	-0.01	
	05/12/98	ND	20.1	0.01	
	05/19/98	ND	20.2	ND	
	05/26/98	ND	19.8	ND	
25	05/05/98	ND	18.9	ND	
	05/12/98	ND	20.1	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.7	ND	
25A	05/05/98	ND	19.0	-0.02	
	05/12/98	ND	17.3	-0.01	
	05/19/98	ND	20.4	-0.01	
	05/26/98	ND	20.3	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26	05/05/98	ND	19.8	-0.03	
	05/12/98	ND	19.8	0.02	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.3	ND	
26A	05/05/98	ND	20.2	-0.03	
	05/12/98	ND	18.5	ND	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	20.4	-0.01	
26B	05/05/98	ND	19.9	0.01	
	05/12/98	ND	19.2	ND	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	19.9	-0.01	
27	05/05/98	ND	20.4	ND	
	05/12/98	ND	16.7	ND	
	05/19/98	ND	20.3	-0.01	
	05/26/98	ND	20.4	0.01	
27A	05/05/98	ND	20.8	ND	
	05/12/98	ND	20.5	0.03	
	05/19/98	ND	19.7	0.01	
	05/26/98	ND	20.2	ND	
28	05/05/98	ND	20.6	ND	
	05/12/98	ND	19.3	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.8	-0.01	
30A	05/05/98	ND	20.1	0.02	
	05/12/98	ND	20.8	0.03	
	05/19/98	ND	20.2	1.0	
	05/26/98	ND	20.8	ND	
31	05/05/98	ND	19.6	0.04	
	05/12/98	ND	20.8	0.07	
	05/19/98	ND	20.4	2.1	
	05/26/98	ND	20.5	0.01	
31A	05/05/98	ND	20.1	0.01	
	05/12/98	ND	20.4	0.01	
	05/19/98	ND	20.4	1.3	
	05/26/98	ND	20.6	ND	
32	05/05/98	ND	20.4	ND	
	05/12/98	ND	19.9	0.01	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	20.4	0.01	
32A	05/05/98	ND	20.7	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	05/12/98	ND	19.6	ND	
	05/19/98	ND	20.4	0.01	
	05/26/98	ND	20.4	ND	
33	05/05/98	ND	18.9	ND	
	05/12/98	ND	17.7	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	19.5	ND	
34	05/05/98	ND	16.4	0.01	
	05/12/98	ND	17.1	0.02	
	05/19/98	ND	19.6	ND	
	05/26/98	ND	14.6	-0.01	
35	05/05/98	ND	20.0	0.03	
	05/12/98	ND	20.4	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.5	ND	
36B	05/05/98	ND	17.9	0.03	
	05/12/98	ND	12.9	0.05	
	05/19/98	ND	18.3	ND	
	05/26/98	ND	20.7	ND	
37	05/05/98	ND	20.3	0.09	
	05/12/98	ND	19.6	ND	
	05/19/98	ND	20.1	-0.01	
	05/26/98	ND	20.5	ND	
38	05/05/98	ND	20.1	0.05	
	05/12/98	18.7	0.3	0.03	
	05/19/98	ND	20.4	-0.06	
	05/26/98	ND	20.2	0.02	
39	05/05/98	ND	20.4	-0.18	
	05/12/98	ND	20.4	0.29	
	05/19/98	NT	NT	NT	PLUGGED
	05/26/98	ND	20.6	ND	
40	05/05/98	ND	18.8	0.01	
	05/12/98	ND	20.5	ND	
	05/19/98	ND	20.5	ND	
	05/26/98	ND	20.6	ND	
41	05/05/98	ND	18.9	-0.02	
	05/12/98	ND	18.2	0.01	
	05/19/98	ND	19.8	0.01	
	05/26/98	ND	15.4	0.02	
42	05/05/98	ND	15.3	ND	
	05/12/98	ND	20.3	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
42	05/19/98	ND	20.4	ND	
	05/26/98	ND	17.1	0.04	
43	05/05/98	ND	11.8	ND	
	05/12/98	ND	1.6	ND	
	05/19/98	ND	9.1	-0.01	
	05/26/98	ND	13.5	ND	
45	05/05/98	ND	17.3	0.01	
	05/12/98	ND	19.3	0.04	
	05/19/98	ND	20.1	-0.02	
	05/26/98	ND	20.3	-0.02	
46	05/05/98	ND	20.1	ND	
	05/12/98	ND	19.1	ND	
	05/19/98	ND	20.2	-0.01	
	05/26/98	ND	20.7	ND	
1B'	05/05/98	ND	18.3	-0.03	
	05/12/98	ND	17.1	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	18.0	ND	
1C'	05/05/98	ND	19.1	-0.02	
	05/12/98	ND	17.5	0.02	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	19.3	ND	
2B'	05/05/98	ND	19.1	-0.02	
	05/12/98	ND	17.7	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	19.8	ND	
2C'	05/05/98	ND	20.6	-0.01	
	05/12/98	ND	16.2	0.02	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.6	ND	
3B'	05/05/98	ND	18.3	-0.02	
	05/12/98	ND	16.7	0.01	
	05/19/98	ND	20.5	-0.03	
	05/26/98	ND	20.6	ND	
3C'	05/05/98	ND	17.8	-0.02	
	05/12/98	ND	15.6	0.01	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	13.9	ND	
4B'	05/05/98	ND	16.9	-0.02	
	05/12/98	ND	15.0	0.01	
	05/19/98	ND	20.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
4B'	05/26/98	ND	18.4	-0.01	
4C'	05/05/98	ND	17.5	-0.01	
	05/12/98	ND	15.3	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.7	ND	
5B'	05/05/98	ND	16.3	-0.05	
	05/12/98	ND	16.8	0.04	
	05/19/98	ND	19.8	ND	
	05/26/98	ND	17.8	-0.03	
5C'	05/05/98	ND	20.4	-0.07	
	05/12/98	ND	18.7	0.04	
	05/19/98	ND	19.8	ND	
	05/26/98	ND	19.5	-0.02	
6B'	05/05/98	ND	19.1	-0.02	
	05/12/98	ND	12.9	-0.02	
	05/19/98	ND	20.3	ND	
	05/26/98	ND	20.6	-0.01	
6C'	05/05/98	ND	17.9	-0.02	
	05/12/98	ND	13.8	-0.01	
	05/19/98	ND	19.1	ND	
	05/26/98	ND	20.5	-0.01	
7B'	05/05/98	ND	16.9	-0.02	
	05/12/98	ND	17.6	-0.02	
	05/19/98	ND	19.0	-0.01	
	05/26/98	ND	18.3	ND	
7C'	05/05/98	ND	17.3	-0.02	
	05/12/98	ND	17.6	-0.02	
	05/19/98	ND	18.6	-0.01	
	05/26/98	ND	18.8	ND	
8B'	05/05/98	ND	16.5	ND	
	05/12/98	ND	18.9	ND	
	05/19/98	ND	20.4	ND	
	05/26/98	ND	20.6	ND	
8C'	05/05/98	ND	18.7	ND	
	05/12/98	ND	17.6	ND	
	05/19/98	ND	20.3	0.01	
	05/26/98	ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

ur89003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/05/98	P-1	ND	18.4	1.8	-0.14	0.04	62	1	
05/05/98	P-2	ND	19.4	2.1	-0.14	0.01	60	0	
05/05/98	P-3	ND	17.3	3.6	-0.18	0.03	61	1	
05/05/98	P-4	ND	20.4	ND	-0.18	ND	60	0	
05/05/98	P-5	ND	17.2	6.2	-0.20	ND	61	0	
05/05/98	P-6	ND	16.3	4.8	-0.24	0.02	61	0	
05/05/98	P-7	ND	20.4	ND	-0.24	0.04	61	0	
05/05/98	P-10	0.2	8.8	11.2	-0.24	-0.03	77	0	
05/05/98	P-11	ND	18.4	1.4	-0.34	-0.01	62	1	
05/05/98	P-13	ND	19.4	1.4	-0.34	ND	61	0	
05/05/98	P-14	ND	18.6	3.2	-0.34	ND	60	0	
05/05/98	P-15	ND	19.9	1.4	-0.34	ND	62	0	
05/05/98	P-16	ND	19.8	0.4	-0.34	0.01	60	0	
05/05/98	P-17	ND	18.7	0.8	-0.34	ND	61	0	
05/05/98	P-18	ND	16.2	4.2	-0.34	0.01	62	0	
05/05/98	P-19	ND	11.3	10.3	-0.34	0.02	64	1	
05/05/98	P-20	ND	19.8	1.1	-0.36	ND	64	0	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0.0003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/05/98	P-21	ND	10.4	4.6	-0.36	-0.04	80	1	
05/05/98	P-22	ND	20.4	ND	-0.36	0.01	61	0	
05/05/98	P-23	11.2	4.7	18.6	-0.36	-0.28	104	16	
05/05/98	P-24	13.1	4.9	20.7	-0.36	-0.24	117	12	
05/05/98	P-25	9.4	8.4	17.3	-0.36	-0.28	106	16	
05/05/98	P-26	ND	20.4	ND	-0.36	0.02	61	0	
05/05/98	P-27	ND	18.6	0.4	-0.38	0.01	62	1	
05/05/98	P-28	12.6	3.1	21.4	-0.34	-0.31	121	16	
05/05/98	P-29	3.8	10.1	9.8	-0.34	-0.24	101	12	
05/05/98	P-30	4.6	6.8	14.1	-0.34	-0.28	108	12	
05/05/98	P-31	1.3	10.2	4.4	-0.34	-0.28	84	8	
05/05/98	P-32	ND	20.2	1.1	-0.30	ND	60	0	
05/05/98	P-33	ND	20.4	ND	-0.28	ND	61	0	
05/05/98	P-34	ND	19.4	1.8	-0.28	0.01	61	0	
05/05/98	P-35	3.4	4.2	11.4	-0.28	-0.12	98	4	
05/05/98	P-36	0.2	12.8	12.6	-0.28	-0.10	88	2	
05/05/98	P-37	ND	19.4	1.9	-0.24	ND	61	0	

ND=None Detected    Deg. F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/05/98	P-38	ND	20.4	ND	-0.24	ND	62	0	
05/05/98	P-39	ND	20.4	ND	-0.24	0.01	61	0	
05/05/98	W-1	18.6	0.4	31.4	-1.4	-0.32	61	0	
05/05/98	W-2	10.3	0.6	26.2	NT	-0.08	61	0	
05/05/98	W-3	28.2	1.1	34.4	NT	-0.26	61	0	
05/05/98	W-4	31.2	0.3	37.4	NT	-0.48	62	0	
05/05/98	W-5	3.8	10.2	11.8	NT	-1.1	62	0	
05/05/98	W-6	23.7	0.4	29.6	-1.4	-0.22	61	0	
05/05/98	W-7	36.1	1.7	31.8	-1.6	-1.4	68	0	
05/05/98	W-8	24.9	0.6	30.6	NT	-0.08	61	0	
05/05/98	W-9	19.4	0.4	29.8	NT	-0.20	61	0	
05/05/98	W-10	20.6	0.6	31.4	-1.6	-0.26	62	0	
05/05/98	W-11	23.4	0.4	28.6	NT	-0.20	61	0	
05/05/98	W-12	21.3	0.8	26.3	NT	-0.24	62	0	
05/05/98	W-13	41.2	0.4	31.3	NT	-0.12	61	0	SAMPLE PORTS PULLED
05/05/98	W-14	NT	NT	NT	NT	NT	NT	0	SAMPLE PORTS PULLED
05/05/98	W-15	NT	NT	NT	NT	NT	NT	0	SAMPLE PORTS PULLED

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/05/98	W-16	26.4	0.8	32.4	-1.9	-0.31	62	48	
05/05/98	W-17	28.6	0.9	31.8	-1.9	-1.6	62	76	
05/05/98	W-18	24.2	0.4	29.2	-1.9	-0.24	64	29	
05/05/98	W-20	27.1	0.3	33.3	-1.6	-0.32	66	48	
05/05/98	W-21	32.8	0.9	38.4	-1.8	-1.6	82	36	
05/05/98	W-23	30.6	0.6	27.8	-29.0	-2.4	72	48	
05/05/98	W-24	8.6	9.4	17.3	-27.0	-3	62	29	ADJ TO -0.25
05/05/98	W-25	58.7	0.6	41.4	-27.0	-23	68	64	
05/05/98	W-26	7.8	6.3	16.7	-26.0	-1.4	64	19	
05/05/98	W-27	59.6	0.4	38.6	-29.0	-3.8	78	181	ADJ TO -5.8
05/05/98	W-28	NT	NT	NT	NT	NT	NT	0	UNDER A CAR
05/05/98	W-28A	28.4	0.8	34.2	-27.0	-2.4	102	40	
05/05/98	W-28B	36.3	0.7	36.8	-27.0	-0.42	97	38	
05/05/98	W-29	34.7	0.8	31.6	-20.0	-6.5	62	0	
05/05/98	W-29A	26.8	0.6	28.4	-1.2	-0.68	64	19	
05/05/98	W-30	46.7	0.8	37.3	-26.0	-23.0	62	72	
05/05/98	W-31	53.8	0.6	41.2	-26.0	-22	68	36	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
05/05/98	W-32	28.3	0.4	27.6	-26.0	-0.68	64	12	
05/05/98	W-33	29.8	1.1	28.9	-26.0	-22	64	95	
05/05/98	W-36	43.6	0.6	36.3	-26.0	-10.8	78	152	
05/05/98	W-37	31.6	2.1	30.2	-26.0	-2.8	70	76	
05/05/98	W-37A	26.2	0.8	22.4	-5	-2.4	91	20	ADJ TO-0.4
05/05/98	W-37B	36.3	0.4	27.6	-0.08	-0.06	64	4	
05/05/98	W-38	41.8	0.4	33.6	-21.0	-2.8	62	0	
05/05/98	W-38A	53.1	1.3	40.7	-15	-15	66	171	
05/05/98	W-38B	57.6	0.3	38.6	-0.14	-0.12	64	10	
05/05/98	W-39	0.4	11.4	16.2	-22.0	-0.89	64	10	
05/05/98	W-40	ND	20.4	ND	-22.0	ND	40	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							121		
Minimum:							60		

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
05/05/98	25.8	2.5	-39.0	10.1	697	1544	2474
05/12/98	25.4	2.8	-37.5	10.0	679	1547	2242
05/19/98	23.8	2.9	-38.0	11.1	682	1550	3760
05/26/98	23.7	3.3	-37.5	10.7	661	1538	2474
=====	=====	=====	=====	=====	=====	=====	=====
Total:							10950
Minimum:						1538	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column

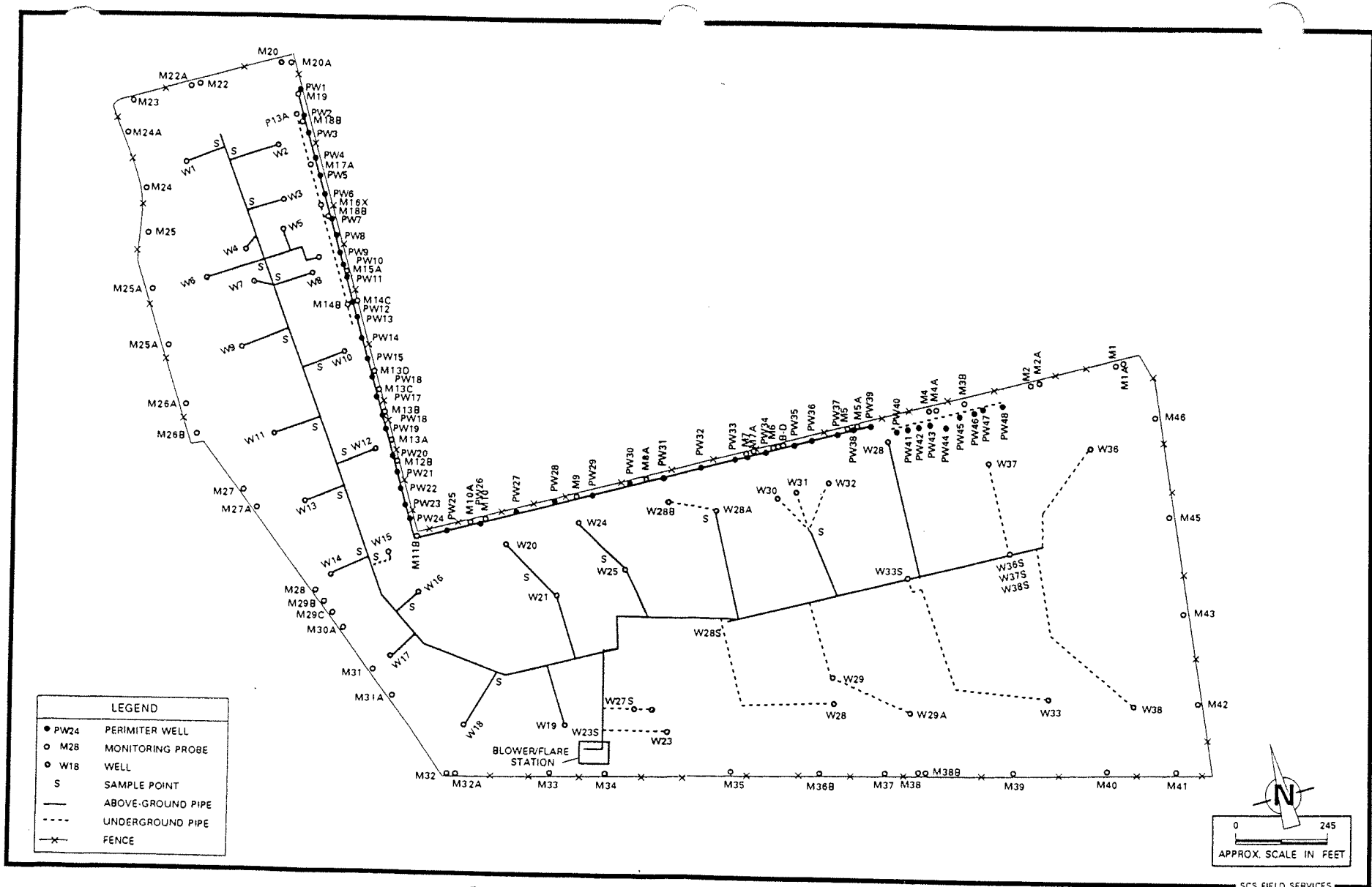


Figure 1. Hewitt North Hollywood/Probes and Well Field.

**SCS FIELD SERVICES, INC.**

July 21, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of June 1 through 30, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas above the LEL was detected at any of the monitoring wells tested. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 11,188 gallons as measured at the flare inlet flow meter.
- On June 2, 1998, SCS-FS repaired broken PVC fittings on the inlet side of the field filter housing and repaired a leak on the field filter gasket.
- On June 10, 1998, SCS-FS switched out Condensate Pump Nos. 3, 4, and 5. The old pumps were sent to the manufacturer for repairs.



Mr. George Cosby  
July 21, 1998  
Page Two

- On June 23, 1998, Vaughans Industrial was on-site to replace the motor and belts for Blower No. 1.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

**SCS FIELD SERVICES, INC.**

July 21, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of June 1 through 30, 1998.

Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, no methane gas above the LEL was detected at any of the LFG monitoring wells tested. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration. At the end of the reporting period, no methane gas was detected at Monitoring Probe No. 38.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Mr. George Cosby  
July 21, 1998  
Page Three

No methane gas was detected beneath any of the structures tested.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells indicated that a significant number of wells exhibited an overpull condition. This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The temperatures ranged from 70 to 131 degrees Fahrenheit. The result of this survey indicated subsurface temperatures are in the normal to high range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

Mr. George Cosby  
July 21, 1998  
Page Four

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, no unscheduled shut-downs occurred.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1537 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 11,188 gallons as measured by the flare inlet flow meter.

On June 2, 1998, SCS-FS repaired broken PVC fittings on the inlet side of the field filter housing and repaired a leak on the field filter gasket.

Also, on June 23, 1998, Vaughans Industrial was on-site to replace the motor and belts for Blower No. 1.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

Mr. George Cosby  
July 21, 1998  
Page Five

In addition, On June 10, 1998, SCS-FS switched out Condensate Pump Nos. 3,4, and 5. The old pumps were sent to the manufacturer for repairs.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. The next quarterly site observation is scheduled to be conducted in July 1998.

#### Standard Provisions

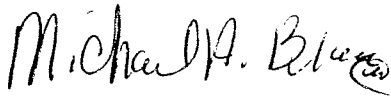
This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

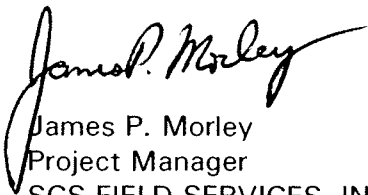
Mr. George Cosby  
July 21, 1998  
Page Six

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read "Michael A. Braun". The signature is fluid and cursive, with a large initial "M" and a stylized "A".

Michael A. Braun  
Senior Technician

A handwritten signature in black ink, appearing to read "James P. Morley". The signature is fluid and cursive, with a large initial "J" and a stylized "M".

James P. Morley  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	06/02/98	ND	20.3	ND	
	06/09/98	ND	17.3	ND	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.0	ND	
	06/30/98	ND	20.6	ND	
1A	06/02/98	ND	18.7	ND	
	06/09/98	ND	18.8	ND	
	06/16/98	ND	18.6	ND	
	06/23/98	ND	19.6	0.02	
	06/30/98	ND	18.8	-0.01	
2	06/02/98	ND	19.4	ND	
	06/09/98	ND	20.3	ND	
	06/16/98	ND	14.1	ND	
	06/23/98	ND	19.8	0.01	
	06/30/98	ND	20.0	ND	
2A	06/02/98	ND	17.1	ND	
	06/09/98	ND	18.9	ND	
	06/16/98	ND	13.3	ND	
	06/23/98	ND	19.5	ND	
	06/30/98	ND	18.6	ND	
3B	06/02/98	ND	13.9	-0.01	
	06/09/98	ND	17.3	ND	
	06/16/98	ND	19.1	ND	
	06/23/98	ND	12.5	ND	
	06/30/98	ND	20.2	-0.01	
4	06/02/98	ND	20.0	0.13	
	06/09/98	ND	19.9	ND	
	06/16/98	ND	18.2	ND	
	06/23/98	ND	18.6	0.13	
	06/30/98	ND	18.1	-0.02	
4A	06/02/98	ND	18.9	0.01	
	06/09/98	ND	19.1	ND	
	06/16/98	ND	18.2	0.04	
	06/23/98	ND	19.7	0.02	
	06/30/98	ND	19.4	-0.01	
5	06/02/98	ND	19.3	ND	
	06/09/98	ND	19.9	-0.07	
	06/16/98	ND	15.2	ND	
	06/23/98	ND	20.5	ND	
	06/30/98	ND	20.6	-0.02	
5A	06/02/98	ND	20.4	ND	
	06/09/98	ND	20.5	0.30	
	06/16/98	ND	20.3	0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
5A	06/23/98	ND	20.0	0.02	
	06/30/98	ND	20.2	-0.08	
6B	06/02/98	ND	18.9	ND	
	06/09/98	ND	18.9	-0.06	
	06/16/98	ND	18.7	0.03	
	06/23/98	ND	18.8	0.08	
	06/30/98	ND	19.2	-0.02	
6C	06/02/98	ND	17.7	ND	
	06/09/98	ND	17.3	ND	
	06/16/98	ND	16.9	ND	
	06/23/98	ND	17.2	ND	
	06/30/98	ND	17.5	ND	
6D	06/02/98	ND	19.0	ND	
	06/09/98	ND	20.0	-0.07	
	06/16/98	ND	18.8	ND	
	06/23/98	ND	18.8	0.04	
	06/30/98	ND	19.8	-0.10	
7	06/02/98	ND	20.8	4.50	PARTIALLY PLUGGED
	06/09/98	ND	20.5	-0.03	
	06/16/98	ND	20.6	0.01	
	06/23/98	ND	20.5	-0.01	
	06/30/98	ND	20.5	ND	PARTIALLY PLUGGED
7A	06/02/98	ND	20.4	0.02	
	06/09/98	ND	20.5	-0.05	
	06/16/98	ND	20.5	ND	
	06/23/98	ND	20.6	0.01	
	06/30/98	ND	20.6	ND	
8A	06/02/98	ND	15.6	ND	
	06/09/98	ND	17.5	-0.06	
	06/16/98	ND	17.7	-0.01	
	06/23/98	ND	18.5	0.01	
	06/30/98	ND	17.9	-0.04	
9	06/02/98	ND	18.6	-0.03	
	06/09/98	ND	20.4	0.01	
	06/16/98	ND	20.6	-0.06	
	06/23/98	ND	20.0	0.02	
	06/30/98	ND	20.6	-0.10	
10	06/02/98	ND	20.1	ND	
	06/09/98	ND	19.8	0.16	
	06/16/98	ND	20.2	ND	
	06/23/98	ND	20.0	0.01	
	06/30/98	ND	20.3	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
10A	06/02/98	ND	20.5	ND	
	06/09/98	ND	20.4	-0.02	
	06/16/98	ND	20.0	ND	
	06/23/98	ND	20.4	0.01	
	06/30/98	ND	20.2	ND	
11B	06/02/98	ND	20.5	0.01	
	06/09/98	ND	20.3	-0.08	
	06/16/98	ND	20.6	-0.04	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.4	-0.05	
12B	06/02/98	ND	20.7	ND	
	06/09/98	ND	20.8	-0.09	
	06/16/98	ND	20.6	ND	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.3	-0.02	
13B	06/02/98	ND	20.8	ND	
	06/09/98	ND	20.6	0.05	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.4	-0.02	
13D	06/02/98	ND	20.8	ND	
	06/09/98	ND	20.7	0.04	
	06/16/98	ND	20.5	ND	
	06/23/98	ND	20.5	0.01	
	06/30/98	ND	20.4	-0.02	
13C	06/02/98	ND	20.5	ND	
	06/09/98	ND	20.7	0.04	
	06/16/98	ND	20.1	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	20.3	-0.04	
13X	06/02/98	ND	20.4	ND	
	06/09/98	ND	20.6	-0.02	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	20.4	ND	
14B	06/02/98	ND	20.7	3.00	PARTIALLY PLUGGED
	06/09/98	ND	20.8	0.83	PARTIALLY PLUGGED
	06/16/98	ND	20.4	0.27	
	06/23/98	ND	20.6	1.4	
	06/30/98	ND	20.6	0.03	PARTIALLY PLUGGED
14C	06/02/98	ND	20.5	ND	
	06/09/98	ND	19.8	-0.02	
	06/16/98	ND	20.4	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
14C	06/23/98	ND	18.2	0.01	
	06/30/98	ND	20.4	ND	
15A	06/02/98	ND	20.8	2.40	PARTIALLY PLUGGED
	06/09/98	ND	20.8	0.40	PARTIALLY PLUGGED
	06/16/98	ND	20.5	0.02	PARTIALLY PLUGGED
	06/23/98	ND	19.5	ND	
	06/30/98	ND	20.6	0.04	PARTIALLY PLUGGED
16A	06/02/98	ND	20.0	0.02	
	06/09/98	ND	20.5	-0.03	
	06/16/98	ND	14.5	-0.01	
	06/23/98	ND	14.2	0.01	
	06/30/98	ND	15.7	-0.06	
16X	06/02/98	ND	20.1	ND	
	06/09/98	ND	20.0	ND	
	06/16/98	ND	18.7	ND	
	06/23/98	ND	20.1	ND	
	06/30/98	ND	20.4	ND	
17A	06/02/98	ND	13.7	0.33	
	06/09/98	ND	14.5	0.10	
	06/16/98	ND	14.1	0.03	
	06/23/98	ND	14.1	ND	
	06/30/98	ND	15.7	-0.01	
18B	06/02/98	ND	15.4	0.02	
	06/09/98	ND	16.1	-0.02	
	06/16/98	ND	16.6	ND	
	06/23/98	ND	18.7	0.01	
	06/30/98	ND	16.4	ND	
19	06/02/98	ND	19.3	0.01	
	06/09/98	ND	19.3	ND	
	06/16/98	ND	18.2	ND	
	06/23/98	ND	18.8	0.01	
	06/30/98	ND	18.7	0.01	
20	06/02/98	ND	15.8	0.01	
	06/09/98	ND	17.5	ND	
	06/16/98	ND	17.4	ND	
	06/23/98	ND	17.6	ND	
	06/30/98	ND	17.5	0.03	
20A	06/02/98	ND	17.3	0.01	
	06/09/98	ND	17.7	ND	
	06/16/98	ND	17.6	0.02	
	06/23/98	ND	17.7	ND	
	06/30/98	ND	17.7	0.04	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
22	06/02/98	ND	19.9	ND	
	06/09/98	ND	20.4	0.01	
	06/16/98	ND	20.5	0.02	
	06/23/98	ND	18.4	ND	
	06/30/98	ND	19.1	-0.02	
22A	06/02/98	ND	20.1	0.10	
	06/09/98	ND	20.1	0.01	
	06/16/98	ND	18.4	ND	
	06/23/98	ND	19.8	ND	
	06/30/98	ND	18.8	ND	
23	06/02/98	ND	19.7	0.01	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	19.6	0.06	
	06/23/98	ND	19.9	2.30	
	06/30/98	ND	20.4	0.02	
24	06/02/98	ND	20.5	0.01	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	19.4	ND	
	06/23/98	ND	20.2	ND	
	06/30/98	ND	20.5	ND	
24A	06/02/98	ND	19.7	ND	
	06/09/98	ND	20.6	ND	
	06/16/98	ND	19.8	ND	
	06/23/98	ND	20.3	0.01	
	06/30/98	ND	20.2	ND	
25	06/02/98	ND	20.7	ND	
	06/09/98	ND	19.4	-0.02	
	06/16/98	ND	20.6	ND	
	06/23/98	ND	20.5	0.02	
	06/30/98	ND	20.6	ND	
25A	06/02/98	ND	19.4	ND	
	06/09/98	ND	19.7	-0.01	
	06/16/98	ND	19.4	ND	
	06/23/98	ND	19.5	ND	
	06/30/98	ND	19.0	ND	
26	06/02/98	ND	20.1	0.01	
	06/09/98	ND	20.3	ND	
	06/16/98	ND	19.6	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.2	ND	
26A	06/02/98	ND	20.1	ND	
	06/09/98	ND	20.0	0.01	
	06/16/98	ND	19.7	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26A	06/23/98	ND	20.1	0.01	
	06/30/98	ND	19.7	ND	
26B	06/02/98	ND	19.8	0.01	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	19.6	0.01	
	06/23/98	ND	20.0	0.02	
	06/30/98	ND	20.1	ND	
27	06/02/98	ND	20.3	ND	
	06/09/98	ND	19.5	-0.01	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.3	ND	
27A	06/02/98	ND	19.6	-0.02	
	06/09/98	ND	20.3	-0.02	
	06/16/98	ND	19.6	0.02	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	19.4	ND	
28	06/02/98	ND	20.0	ND	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	20.2	-0.01	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.3	ND	
30A	06/02/98	ND	20.5	0.18	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	20.6	0.14	
	06/23/98	ND	20.5	1.50	
	06/30/98	ND	20.3	0.08	
31	06/02/98	ND	20.3	0.28	
	06/09/98	ND	20.4	0.34	
	06/16/98	ND	20.5	0.02	
	06/23/98	ND	20.3	3.40	
	06/30/98	ND	20.3	0.04	PARTIALLY PLUGGED
31A	06/02/98	ND	19.7	0.14	
	06/09/98	ND	19.5	0.03	
	06/16/98	ND	18.6	0.48	
	06/23/98	ND	20.4	1.20	
	06/30/98	ND	18.6	0.06	
32	06/02/98	ND	20.3	ND	
	06/09/98	ND	18.9	ND	
	06/16/98	ND	20.3	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%-vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	06/02/98	ND	18.1	ND	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	20.3	ND	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.5	0.01	
33	06/02/98	ND	19.6	ND	
	06/09/98	ND	19.9	ND	
	06/16/98	ND	19.2	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	19.8	ND	
34	06/02/98	ND	19.9	ND	
	06/09/98	ND	20.6	ND	
	06/16/98	ND	14.1	ND	
	06/23/98	ND	18.7	ND	
	06/30/98	ND	17.8	ND	
35	06/02/98	ND	20.3	0.02	
	06/09/98	ND	20.6	ND	
	06/16/98	ND	20.7	ND	
	06/23/98	ND	20.3	ND	
	06/30/98	ND	20.3	0.01	
36B	06/02/98	ND	19.4	ND	
	06/09/98	ND	20.4	ND	
	06/16/98	ND	18.4	0.01	
	06/23/98	ND	18.3	0.02	
	06/30/98	ND	18.2	ND	
37	06/02/98	ND	20.5	ND	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	20.4	ND	
	06/23/98	ND	20.6	0.01	
	06/30/98	ND	20.4	ND	
38	06/02/98	ND	20.3	ND	
	06/09/98	ND	20.5	-0.04	
	06/16/98	0.9	8.1	ND	
	06/23/98	0.1	12.4	0.02	
	06/30/98	NT	NT	NT	DAMAGED
39	06/02/98	ND	20.6	0.10	
	06/09/98	ND	20.4	0.21	
	06/16/98	ND	20.3	2.10	
	06/23/98	ND	20.6	0.11	
	06/30/98	ND	20.4	ND	PARTIALLY PLUGGED
40	06/02/98	ND	20.5	0.01	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	20.5	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
40	06/23/98	ND	20.4	0.01	
	06/30/98	ND	20.4	ND	
41	06/02/98	ND	16.3	0.01	
	06/09/98	ND	17.6	ND	
	06/16/98	ND	14.1	-0.01	
	06/23/98	ND	19.2	ND	
	06/30/98	ND	18.8	ND	
42	06/02/98	ND	18.5	ND	
	06/09/98	ND	20.1	0.02	
	06/16/98	ND	9.4	0.01	
	06/23/98	ND	18.9	0.01	
	06/30/98	ND	19.2	0.01	
43	06/02/98	ND	9.9	ND	
	06/09/98	ND	10.5	ND	
	06/16/98	ND	9.2	ND	
	06/23/98	ND	16.6	0.01	
	06/30/98	ND	12.1	-0.02	
45	06/02/98	ND	20.1	ND	
	06/09/98	ND	19.6	-0.02	
	06/16/98	ND	19.8	ND	
	06/23/98	ND	16.9	0.02	
	06/30/98	ND	19.9	-0.01	
46	06/02/98	ND	20.6	ND	
	06/09/98	ND	20.5	ND	
	06/16/98	ND	20.2	0.01	
	06/23/98	ND	20.1	0.01	
	06/30/98	ND	20.4	ND	
1B'	06/02/98	ND	20.0	ND	
	06/09/98	ND	20.5	-0.01	
	06/16/98	ND	20.2	0.01	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.5	-0.01	
1C'	06/02/98	ND	20.7	ND	
	06/09/98	ND	20.6	-0.02	
	06/16/98	ND	19.8	0.02	
	06/23/98	ND	20.0	ND	
	06/30/98	ND	20.1	-0.06	
2B'	06/02/98	ND	20.1	ND	
	06/09/98	ND	20.5	-0.05	
	06/16/98	ND	20.2	ND	
	06/23/98	ND	20.4	0.01	
	06/30/98	ND	20.6	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
2C'	06/02/98	ND	20.8	0.01	
	06/09/98	ND	20.3	-0.03	
	06/16/98	ND	18.6	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.5	ND	
3B'	06/02/98	ND	20.5	ND	
	06/09/98	ND	19.9	-0.02	
	06/16/98	ND	18.2	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	20.5	-0.02	
3C'	06/02/98	ND	20.0	0.03	
	06/09/98	ND	20.2	-0.02	
	06/16/98	ND	12.0	0.01	
	06/23/98	ND	20.3	0.01	
	06/30/98	ND	20.6	-0.12	
4B'	06/02/98	ND	19.8	0.04	
	06/09/98	ND	20.6	-0.10	
	06/16/98	ND	16.4	ND	
	06/23/98	ND	19.9	ND	
	06/30/98	ND	20.5	-0.02	
4C'	06/02/98	ND	19.7	0.02	
	06/09/98	ND	19.3	-0.05	
	06/16/98	ND	14.2	-0.01	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.6	-0.02	
5B'	06/02/98	ND	16.9	0.03	
	06/09/98	ND	20.1	-0.03	
	06/16/98	ND	17.3	ND	
	06/23/98	ND	20.1	ND	
	06/30/98	ND	20.6	-0.08	
5C'	06/02/98	ND	19.3	0.01	
	06/09/98	ND	20.4	-0.02	
	06/16/98	ND	16.8	0.03	
	06/23/98	ND	18.2	0.01	
	06/30/98	ND	19.3	-0.04	
6B'	06/02/98	ND	20.0	ND	
	06/09/98	ND	19.8	-0.01	
	06/16/98	ND	19.9	0.01	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.5	ND	
6C'	06/02/98	ND	20.2	ND	
	06/09/98	ND	20.1	-0.01	
	06/16/98	ND	11.6	0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C'	06/23/98	ND	20.0	ND	
	06/30/98	ND	20.6	ND	
7B'	06/02/98	ND	18.3	-0.01	
	06/09/98	ND	18.3	-0.02	
	06/16/98	ND	17.9	ND	
	06/23/98	ND	20.4	ND	
	06/30/98	ND	18.6	0.02	
7C'	06/02/98	ND	18.6	-0.01	
	06/09/98	ND	19.4	-0.01	
	06/16/98	ND	17.2	0.01	
	06/23/98	ND	20.1	ND	
	06/30/98	ND	19.1	ND	
8B'	06/02/98	ND	19.5	0.01	
	06/09/98	ND	20.7	-0.03	
	06/16/98	ND	16.8	0.06	
	06/23/98	ND	20.6	ND	
	06/30/98	ND	20.6	ND	
8C'	06/02/98	ND	20.6	ND	
	06/09/98	ND	20.6	-0.01	
	06/16/98	ND	16.7	0.03	
	06/23/98	ND	19.1	ND	
	06/30/98	ND	20.6	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
P-1	06/16/98	ND	10.8	4.6	-0.20	0.08	76	ND	
P-2	06/16/98	ND	15.0	3.9	-0.20	ND	76	ND	
P-3	06/16/98	ND	16.5	3.6	-0.22	0.14	77	ND	
P-4	06/16/98	ND	8.8	10.1	-0.28	ND	75	ND	
P-5	06/16/98	ND	15.9	5.0	-0.28	0.07	76	ND	
P-6	06/16/98	ND	17.3	1.2	-0.28	0.02	75	ND	
P-7	06/16/98	ND	11.9	8.6	-0.28	ND	75	ND	
P-10	06/16/98	ND	9.7	10.6	-0.32	-0.09	81	ND	
P-11	06/16/98	ND	11.8	6.3	-0.32	-0.02	78	0	
P-13	06/16/98	ND	13.5	5.8	-0.32	0.08	74	ND	
P-14	06/16/98	NT	NT	NT	NT	NT	NT	NT	DISCONNECTED
P-15	06/16/98	ND	12.3	6.4	-0.32	0.05	80	ND	
P-16	06/16/98	ND	10.0	8.9	-0.32	ND	77	ND	
P-17	06/16/98	ND	4.9	11.3	-0.32	0.11	79	ND	
P-18	06/16/98	ND	12.8	6.5	-0.32	-0.01	71	ND	
P-19	06/16/98	ND	7.9	8.3	-0.32	-0.02	75	0	
P-20	06/16/98	ND	16.0	4.3	-0.34	-0.02	70	0	
P-21	06/16/98	ND	15.5	4.5	-0.34	-0.03	76	1	
P-22	06/16/98	ND	19.2	2.0	-0.34	-0.02	76	0	
P-23	06/02/98	6.2	7.9	13.6	-0.18	-0.12	124	8	
P-24	06/02/98	10.8	5.6	17.0	-0.18	-0.10	121	10	
P-25	06/02/98	7.2	9.0	13.3	-0.18	-0.09	128	8	
P-26	06/02/98	ND	20.6	ND	-0.20	0.02	71	0	
P-27	06/02/98	ND	19.0	1.8	-0.20	0.01	73	0	
P-28	06/02/98	9.0	2.6	21.5	-0.20	-0.10	126	8	
P-29	06/02/98	4.6	11.2	11.4	-0.18	-0.14	131	10	
P-30	06/02/98	4.5	13.9	8.1	-0.18	-0.12	118	6	
P-31	06/02/98	ND	18.8	1.1	-0.16	0.03	72	1	
P-32	06/02/98	ND	18.7	0.6	-0.16	0.02	71	0	
P-33	06/02/98	ND	16.0	3.9	-0.16	0.02	73	0	
P-34	06/02/98	ND	13.7	6.4	-0.16	0.03	74	1	
P-35	06/02/98	7.1	8.9	13.6	-0.14	-0.06	101	6	
P-36	06/02/98	ND	13.9	5.8	-0.14	-0.02	97	2	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

U789003.00

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
P-37	06/02/98	ND	14.7	4.4	-0.10	0.02	73	1	
P-38	06/02/98	ND	17.3	3.8	-0.10	0.06	73	2	
P-39	06/02/98	ND	19.2	1.4	-0.10	0.04	72	1	
W-1	06/02/98	8.7	0.1	21.9	-0.18	-0.16	89	0	
W-2	06/02/98	9.5	0.1	22.1	NT	-0.02	90	0	
W-3	06/02/98	22.9	2.7	23.9	NT	-0.26	90	0	
W-4	06/02/98	22.1	ND	28.7	NT	-0.25	90	0	
W-5	06/02/98	1.2	15.6	8.4	NT	-0.84	88	0	
W-6	06/02/98	21.8	0.8	28.1	-1.20	-0.18	90	0	
W-7	06/02/98	32.9	3.7	26.7	-1.20	-1.00	90	0	
W-8	06/02/98	16.2	0.4	26.1	NT	-0.12	90	0	
W-9	06/02/98	14.1	0.1	24.0	NT	-0.19	91	0	
W-10	06/02/98	12.8	0.2	23.3	-1.20	-0.18	91	0	
W-11	06/02/98	13.3	0.1	23.3	NT	-0.18	90	0	
W-12	06/02/98	17.4	1.1	24.2	NT	-0.21	80	0	
W-13	06/02/98	25.7	0.8	26.2	NT	ND	92	0	
W-14	06/02/98	12.0	2.7	20.3	-1.10	0.21	92	0	
W-15	06/02/98	0.3	16.6	14.8	-1.10	1.10	90	0	
W-16	06/02/98	31.1	0.6	30.9	-1.50	-0.32	89	38	
W-17	06/02/98	21.8	2.3	26.7	-1.50	-1.40	86	86	ADJUSTED TO -0.60
W-18	06/02/98	21.1	0.3	29.0	-1.50	-0.24	84	29	
W-20	06/02/98	26.8	0.3	30.7	-1.30	-0.38	81	38	
W-21	06/02/98	30.2	0.5	31.2	-1.30	-1.10	84	28	
W-23	06/02/98	29.7	1.1	28.7	-34.0	-2.20	78	48	
W-24	06/02/98	36.1	1.7	28.8	-28.0	0.10	72	2	ADJUSTED TO -0.24
W-25	06/02/98	46.4	3.1	37.2	-28.0	-26.0	74	60	
W-26	06/02/98	6.7	6.1	12.7	-23.0	-0.48	72	19	
W-27	06/02/98	43.7	2.9	34.8	-34.0	-11.0	81	228	ADJUSTED TO -8.00
W-28	06/02/98	NT	NT	NT	NT	NT	NT	NT	INACCESSIBLE; UNDER VEHICLE
W-28A	06/02/98	42.8	0.4	37.6	-30.0	-0.10	108	12	ADJUSTED TO -1.80
W-28B	06/02/98	26.3	0.2	30.2	-30.0	0.04	123	0	ADJUSTED TO -0.56
W-29	06/02/98	24.8	3.8	26.7	-9.00	-6.20	71	NT	
W-29A	06/02/98	19.3	1.9	26.3	-2.80	-2.80	74	48	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

Extraction Well	Date	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
W-30	06/02/98	37.9	1.6	32.7	-24.0	-9.00	70	64	
W-31	06/02/98	41.3	3.1	33.2	-24.0	-21.0	82	32	
W-32	06/02/98	19.4	0.3	26.3	-24.0	-0.24	74	8	
W-33	06/02/98	26.1	2.8	23.8	-24.0	-20.0	72	76	
W-36	06/02/98	39.8	1.7	34.1	-23.0	-8.70	106	143	
W-37	06/02/98	21.8	4.9	20.6	-23.0	-7.00	78	95	
W-37A	06/02/98	18.9	0.8	30.4	-7.00	-0.25	118	12	
W-37B	06/02/98	18.3	2.1	26.3	-0.08	-0.08	109	4	
W-38	06/02/98	27.1	1.8	29.1	-17.5	-1.80	72	NT	
W-38A	06/02/98	39.9	2.9	32.5	-8.50	-8.50	74	162	
W-38B	06/02/98	37.2	0.8	34.6	-0.16	-0.12	78	10	
W-39	06/02/98	0.2	16.3	18.4	-17.5	0.82	72	10	
W-40	06/02/98	ND	20.8	ND	-15.0	ND	72	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							131		
Minimum:							70		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

**SCS FIELD SERVICES, INC.**

January 21, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities, North Hollywood, California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of December 1 through 31, 1997. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected at any of the monitoring wells tested with the exception of Probe Nos. 9 and 11B which had methane readings of 4.8 and 5.9 percent by volume, respectively. No methane was detected in either probe during the following week of monitoring. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 1,695 gallons as measured at the flare inlet flow meter. This reading is inaccurate due to the flow totalizer malfunctioning. GCE has been informed of this problem. As of the writing of this report, the flow totalizer has been replaced and is in normal operation.

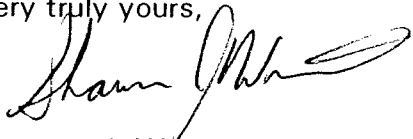


Mr. George Cosby  
January 21, 1998  
Page Two

- On December 6, 1997, SCS-FS was on-site to drain the condensate tanks which were both full. The tanks were pumped into the field condensate traps. The system was restarted without further incident.
- SCS-FS was on-site December 23 and 30, 1997, to discover the system was down. It appeared that the flare had failed on low temperature. Flex hoses and clamps were repaired or replaced and the system was restarted. On December 30, 1997, SCS-FS verified the ADS system was not operating properly. As of the date of this report, the ADS has been repaired by others.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

## SCS FIELD SERVICES, INC.

January 21, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of December 1 through 31, 1997.

### Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



Mr. George Cosby  
January 21, 1998  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, no methane gas was detected at any of the LFG monitoring wells tested with the exception of Probe Nos. 9 and 11B which had methane readings of 4.8 and 5.9 percent gas by volume, respectively. No methane gas was detected in either probe during the following week of monitoring. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

Mr. George Cosby  
January 21, 1998  
Page Three

No methane gas was detected beneath any of the structures tested.

#### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells (see Table 2) indicated that a significant number of wells exhibited an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 54 to 121 degrees Fahrenheit (see Table 2). These temperatures are in the normal range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement

Mr. George Cosby  
January 21, 1998  
Page Four

is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, two unscheduled shut-downs occurred and are discussed below:

- SCS-FS was on-site December 23 and 30, 1997, and discovered the flare system down. It appeared that the flare had shut-down on low temperature but no alarms sounded. Flex hoses and clamps were repaired or replaced and the system was restarted. SCS-FS verified the ADS system was not operating properly. As of the writing of this report, the ADS has been repaired by others.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1548 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 1,695 gallons as measured by the flare inlet flow meter, however, the condensate totalizer is still malfunctioning. As of the writing of this report, the flow totalizer has been replaced and is in normal operation.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

Mr. George Cosby  
January 21, 1998  
Page Five

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. The next quarterly site observation is scheduled to be conducted in January 1998.

#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

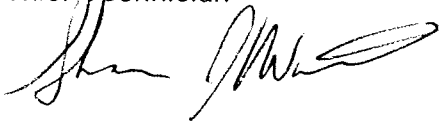
Mr. George Cosby  
January 21, 1998  
Page Six

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	12/02/97	ND	20.5	-0.02	
	12/09/97	ND	19.7	ND	
	12/18/97	ND	19.5	0.04	
	12/23/97	ND	20.2	ND	
	12/30/97	ND	14.2	-0.04	
1A	12/02/97	ND	19.1	-0.01	
	12/09/97	ND	18.9	-0.02	
	12/18/97	ND	18.3	0.06	
	12/23/97	ND	19.2	ND	
	12/30/97	ND	14.3	-0.01	
2	12/02/97	ND	20.4	-0.02	
	12/09/97	ND	19.2	-0.01	
	12/18/97	ND	12.4	0.03	
	12/23/97	ND	20.2	ND	
	12/30/97	ND	8.7	ND	
2A	12/02/97	ND	20.4	-0.02	
	12/09/97	ND	19.8	-0.02	
	12/18/97	ND	14.8	0.04	
	12/23/97	ND	20.1	0.01	
	12/30/97	ND	4.8	ND	
3B	12/02/97	ND	18.0	-0.02	
	12/09/97	ND	19.6	0.01	
	12/18/97	ND	19.1	0.02	
	12/23/97	ND	20.4	0.02	
	12/30/97	ND	9.9	-0.02	
4	12/02/97	ND	20.4	ND	
	12/09/97	ND	20.1	-0.01	
	12/18/97	ND	19.2	0.06	
	12/23/97	ND	20.2	ND	
	12/30/97	ND	12.3	-0.03	
4A	12/02/97	ND	20.4	-0.02	
	12/09/97	ND	20.0	0.01	
	12/18/97	ND	18.8	0.04	
	12/23/97	ND	20.3	ND	
	12/30/97	ND	13.6	-0.01	
5	12/02/97	ND	20.4	-0.12	
	12/09/97	ND	19.7	-0.02	
	12/18/97	ND	12.1	0.15	
	12/23/97	ND	20.6	ND	
	12/30/97	ND	20.1	-0.12	
5A	12/02/97	ND	20.3	ND	
	12/09/97	ND	19.7	-0.12	
	12/18/97	ND	20.1	0.05	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
5A	12/23/97	ND	20.3	ND	
	12/30/97	ND	20.3	ND	
6B	12/02/97	ND	18.7	-0.17	
	12/09/97	ND	19.2	-0.08	
	12/18/97	ND	18.8	0.20	
	12/23/97	ND	20.2	-0.29	
	12/30/97	ND	18.8	-0.10	
6C	12/02/97	ND	18.7	ND	
	12/09/97	ND	17.9	-0.02	
	12/18/97	ND	18.0	ND	
	12/23/97	ND	19.7	-0.01	
	12/30/97	ND	17.9	ND	
6D	12/02/97	ND	19.8	-0.07	
	12/09/97	ND	19.4	-0.06	
	12/18/97	ND	18.8	0.03	
	12/23/97	ND	20.4	-0.14	
	12/30/97	ND	16.0	-0.08	
7	12/02/97	ND	20.5	ND	
	12/09/97	ND	19.8	0.01	
	12/18/97	ND	20.1	ND	
	12/23/97	ND	20.5	ND	PARTIALLY PLUGGED
	12/30/97	ND	20.2	0.01	
7A	12/02/97	ND	20.4	ND	
	12/09/97	ND	19.8	ND	
	12/18/97	ND	20.1	ND	
	12/23/97	ND	20.6	ND	
	12/30/97	ND	20.3	-0.06	
8A	12/02/97	ND	20.2	-0.04	
	12/09/97	ND	19.2	-0.05	
	12/18/97	ND	19.1	0.04	
	12/23/97	ND	19.9	ND	
	12/30/97	ND	20.1	-0.02	
9	12/02/97	ND	20.4	-0.15	
	12/09/97	ND	19.8	-0.06	
	12/18/97	4.8	7.1	0.04	
	12/23/97	ND	20.7	-0.15	
	12/30/97	ND	20.3	-0.08	
10	12/02/97	ND	20.3	ND	
	12/09/97	ND	19.4	0.01	
	12/18/97	ND	19.6	0.04	
	12/23/97	ND	19.9	0.02	
	12/30/97	ND	17.1	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
10A	12/09/97	ND	19.8	ND	
	12/18/97	ND	19.7	0.01	ADJUSTED UP TO 0.20
	12/23/97	ND	19.8	0.04	
	12/30/97	ND	19.1	0.03	
11B	12/02/97	ND	20.4	-0.10	
	12/09/97	ND	19.8	-0.08	
	12/18/97	5.9	0.4	0.01	ADJUSTED UP TO 0.20
	12/23/97	ND	20.7	-0.14	
	12/30/97	ND	19.3	-0.04	
12B	12/02/97	ND	20.5	-0.06	
	12/09/97	ND	19.2	-0.04	
	12/18/97	ND	19.9	ND	
	12/23/97	ND	20.8	-0.12	
	12/30/97	ND	20.7	-0.02	
13B	12/02/97	ND	20.5	-0.06	
	12/09/97	ND	19.8	-0.06	
	12/18/97	ND	18.6	0.01	
	12/23/97	ND	20.7	-0.09	
	12/30/97	ND	20.9	-0.01	
13D	12/02/97	ND	20.4	-0.06	
	12/09/97	ND	19.8	-0.04	
	12/18/97	ND	16.9	0.01	
	12/23/97	ND	20.7	-0.06	
	12/30/97	ND	16.9	-0.03	
13C	12/02/97	ND	20.4	-0.05	
	12/09/97	ND	19.8	-0.04	
	12/18/97	ND	18.7	0.02	
	12/23/97	ND	20.6	-0.07	
	12/30/97	ND	18.7	-0.01	
13X	12/02/97	ND	20.5	-0.01	
	12/09/97	ND	20.2	0.02	
	12/18/97	ND	19.3	0.01	
	12/23/97	ND	20.8	ND	
	12/30/97	ND	19.7	ND	
14B	12/02/97	ND	20.5	-1.90	PARTIALLY PLUGGED
	12/09/97	ND	20.2	1.20	PARTIALLY PLUGGED
	12/18/97	ND	20.3	0.03	PARTIALLY PLUGGED
	12/23/97	ND	20.5	ND	PARTIALLY PLUGGED
	12/30/97	ND	20.9	ND	PLUGGED
14C	12/02/97	ND	20.4	ND	
	12/09/97	ND	20.0	0.02	
	12/18/97	ND	19.3	ND	
	12/23/97	ND	20.3	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
14C	12/30/97	ND	20.1	ND	
15A	12/02/97	ND	20.2	-1.80	PARTIALLY PLUGGED
	12/09/97	ND	19.6	0.01	
	12/18/97	ND	20.3	0.02	PARTIALLY PLUGGED
	12/23/97	ND	20.7	0.05	PARTIALLY PLUGGED
	12/30/97	ND	20.8	ND	PARTIALLY PLUGGED
16A	12/02/97	ND	15.0	-0.12	
	12/09/97	ND	17.2	-0.08	
	12/18/97	ND	10.6	0.02	
	12/23/97	ND	15.9	-0.22	
	12/30/97	ND	16.9	-0.08	
16X	12/02/97	ND	19.7	-0.01	
	12/09/97	ND	19.8	ND	
	12/18/97	ND	17.7	0.02	
	12/23/97	ND	20.7	0.05	PARTIALLY PLUGGED
	12/30/97	ND	18.8	ND	
17A	12/02/97	ND	15.4	-0.06	
	12/09/97	ND	20.2	0.04	
	12/18/97	ND	11.2	0.06	
	12/23/97	ND	20.3	ND	
	12/30/97	ND	14.6	-0.07	
18B	12/02/97	ND	16.7	-0.03	
	12/09/97	ND	19.9	-0.02	
	12/18/97	ND	12.7	ND	
	12/23/97	ND	18.0	0.02	
	12/30/97	ND	10.0	-0.02	
19	12/02/97	ND	19.3	ND	
	12/09/97	ND	19.1	-0.02	
	12/18/97	ND	17.4	0.01	
	12/23/97	ND	20.2	0.01	
	12/30/97	ND	17.4	-0.01	
20	12/02/97	ND	19.0	ND	
	12/09/97	ND	19.3	0.02	
	12/18/97	ND	18.3	0.02	
	12/23/97	ND	20.1	ND	
	12/30/97	ND	20.3	ND	
20A	12/02/97	ND	18.4	-0.04	
	12/09/97	ND	19.1	0.02	
	12/18/97	ND	18.3	0.04	
	12/23/97	ND	18.4	ND	
	12/30/97	ND	19.4	-0.01	
22	12/02/97	ND	19.7	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
22	12/09/97	ND	18.2	0.02	
	12/18/97	ND	19.6	0.04	
	12/23/97	ND	20.7	ND	
	12/30/97	ND	20.8	ND	
22A	12/02/97	ND	20.2	-0.06	
	12/09/97	ND	17.4	ND	
	12/18/97	ND	19.4	0.05	
	12/23/97	ND	20.5	ND	
	12/30/97	ND	20.6	ND	
23	12/02/97	ND	20.3	0.09	PARTIALLY PLUGGED
	12/09/97	ND	20.2	0.04	
	12/18/97	ND	19.8	0.02	
	12/23/97	ND	20.6	ND	
	12/30/97	ND	20.8	ND	
24	12/02/97	ND	20.4	-0.02	
	12/09/97	ND	20.0	-0.02	
	12/18/97	ND	18.7	0.04	
	12/23/97	ND	20.3	0.06	
	12/30/97	ND	20.8	-0.02	
24A	12/02/97	ND	20.4	-0.03	
	12/09/97	ND	19.8	-0.04	
	12/18/97	ND	18.2	0.05	
	12/23/97	ND	20.6	0.07	
	12/30/97	ND	19.6	-0.02	
25	12/02/97	ND	20.4	-0.06	
	12/09/97	ND	19.9	-0.05	
	12/18/97	ND	19.3	0.02	
	12/23/97	ND	20.5	0.09	
	12/30/97	ND	20.8	-0.02	
25A	12/02/97	ND	20.3	-0.03	
	12/09/97	ND	19.4	-0.06	
	12/18/97	ND	18.3	0.06	
	12/23/97	ND	20.1	0.12	
	12/30/97	ND	20.0	ND	
26	12/02/97	ND	20.4	-0.02	
	12/09/97	ND	19.9	-0.04	
	12/18/97	ND	18.2	0.04	
	12/23/97	ND	20.4	0.12	
	12/30/97	ND	19.8	ND	
26A	12/02/97	ND	20.3	-0.04	
	12/09/97	ND	19.9	-0.04	
	12/18/97	ND	18.9	0.04	
	12/23/97	ND	20.4	0.11	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26A	12/30/97	ND	20.9	ND	
26B	12/02/97	ND	20.1	ND	
	12/09/97	ND	19.9	-0.06	
	12/18/97	ND	18.8	0.04	
	12/23/97	ND	20.3	0.05	
	12/30/97	ND	18.0	ND	
27	12/02/97	ND	20.0	ND	
	12/09/97	ND	19.3	-0.05	
	12/18/97	ND	19.3	ND	
	12/23/97	ND	20.6	0.02	PARTIALLY PLUGGED
	12/30/97	ND	18.1	ND	
27A	12/02/97	ND	19.5	-0.02	
	12/09/97	ND	19.1	-0.07	
	12/18/97	ND	19.1	0.03	
	12/23/97	ND	20.5	ND	
	12/30/97	ND	18.5	0.02	
28	12/02/97	ND	19.9	ND	
	12/09/97	ND	19.4	-0.02	
	12/18/97	ND	6.8	0.02	
	12/23/97	ND	20.5	ND	
	12/30/97	ND	8.4	ND	
30A	12/02/97	ND	20.0	0.18	PARTIALLY PLUGGED
	12/09/97	ND	20.1	0.04	
	12/18/97	ND	20.1	0.04	
	12/23/97	ND	20.2	0.05	PARTIALLY PLUGGED
	12/30/97	ND	20.8	ND	
31	12/02/97	ND	20.5	0.39	PARTIALLY PLUGGED
	12/09/97	ND	19.9	0.02	
	12/18/97	ND	19.8	0.04	
	12/23/97	ND	20.6	ND	
	12/30/97	ND	20.5	ND	
31A	12/02/97	ND	20.4	ND	
	12/09/97	ND	19.9	0.08	
	12/18/97	ND	19.9	0.02	
	12/23/97	ND	20.5	ND	
	12/30/97	ND	20.8	ND	
32	12/02/97	ND	20.4	ND	
	12/09/97	ND	19.9	-0.02	
	12/18/97	ND	20.2	ND	
	12/23/97	ND	20.7	ND	
	12/30/97	ND	19.5	ND	
32A	12/02/97	ND	20.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	12/09/97	ND	19.9	ND	
	12/18/97	ND	20.1	ND	
	12/23/97	ND	20.3	ND	
	12/30/97	ND	20.9	0.02	
33	12/02/97	ND	20.4	ND	
	12/09/97	ND	19.8	-0.02	
	12/18/97	ND	17.3	ND	
	12/23/97	ND	20.6	ND	
	12/30/97	ND	16.9	ND	
34	12/02/97	ND	19.4	ND	
	12/09/97	ND	17.9	-0.03	
	12/18/97	ND	16.4	0.02	
	12/23/97	ND	17.8	ND	
	12/30/97	ND	4.8	-0.01	
35	12/02/97	ND	20.4	-0.01	
	12/09/97	ND	19.9	-0.01	
	12/18/97	ND	20.2	ND	
	12/23/97	ND	20.5	ND	
	12/30/97	ND	19.4	ND	
36B	12/02/97	ND	20.3	-0.01	
	12/09/97	ND	19.2	-0.06	
	12/18/97	ND	18.1	0.04	
	12/23/97	ND	20.4	ND	
	12/30/97	ND	6.7	-0.20	
37	12/02/97	ND	20.5	ND	
	12/09/97	ND	19.8	-0.04	
	12/18/97	ND	12.6	0.05	
	12/23/97	ND	20.4	ND	
	12/30/97	ND	16.3	-0.01	
38	12/02/97	ND	20.4	-0.05	
	12/09/97	ND	20.0	-0.11	
	12/18/97	ND	11.4	0.08	
	12/23/97	ND	20.1	ND	
	12/30/97	1.2	11.4	-0.10	
39	12/02/97	NT	NT	NT	INUNDATED WITH WATER
	12/09/97	ND	20.2	0.04	PARTIALLY PLUGGED
	12/18/97	ND	20.2	1.20	PARTIALLY PLUGGED
	12/23/97	ND	20.3	ND	PARTIALLY PLUGGED
	12/30/97	NT	NT	NT	INUNDATED WITH WATER
40	12/02/97	ND	20.4	0.01	
	12/09/97	ND	20.1	0.02	
	12/18/97	ND	18.8	0.03	
	12/23/97	ND	20.1	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
40	12/30/97	ND	20.2	ND	
41	12/02/97	ND	19.7	ND	
	12/09/97	ND	19.4	ND	
	12/18/97	ND	19.1	0.04	
	12/23/97	ND	18.2	ND	
	12/30/97	ND	13.6	-0.01	
42	12/02/97	ND	20.4	0.01	
	12/09/97	ND	20.1	-0.01	
	12/18/97	ND	16.7	0.02	
	12/23/97	ND	20.4	0.01	
	12/30/97	ND	18.0	ND	
43	12/02/97	ND	20.4	-0.04	
	12/09/97	ND	20.1	-0.06	
	12/18/97	ND	14.4	0.06	
	12/23/97	ND	19.2	0.02	
	12/30/97	ND	15.8	-0.05	
45	12/02/97	ND	20.5	-0.08	
	12/09/97	ND	20.1	-0.07	
	12/18/97	ND	17.3	0.03	
	12/23/97	ND	20.3	ND	
	12/30/97	ND	20.2	-0.08	
46	12/02/97	ND	20.4	ND	
	12/09/97	ND	20.2	0.01	
	12/18/97	ND	19.2	ND	
	12/23/97	ND	20.8	ND	
	12/30/97	ND	20.0	ND	
1B'	12/02/97	ND	20.5	-0.12	
	12/09/97	ND	19.0	-0.02	
	12/18/97	ND	19.4	0.06	
	12/23/97	ND	20.6	-0.14	
	12/30/97	ND	20.7	-0.02	
1C'	12/02/97	ND	18.8	-0.06	
	12/09/97	ND	18.9	-0.03	
	12/18/97	ND	17.6	0.04	
	12/23/97	ND	20.5	-0.08	
	12/30/97	ND	20.0	-0.02	
2B'	12/02/97	ND	20.5	-0.05	
	12/09/97	ND	20.1	-0.02	
	12/18/97	ND	18.7	0.02	
	12/23/97	ND	20.3	-0.20	
	12/30/97	ND	20.9	-0.06	
2C'	12/02/97	ND	20.5	-0.07	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
2C'	12/09/97	ND	20.0	-0.02	
	12/18/97	ND	16.1	0.02	
	12/23/97	ND	20.6	-0.21	
	12/30/97	ND	20.9	-0.04	
3B'	12/02/97	ND	20.4	-0.03	
	12/09/97	ND	19.2	-0.01	
	12/18/97	ND	19.1	0.07	
	12/23/97	ND	20.6	0.10	
	12/30/97	ND	20.3	-0.04	
3C'	12/02/97	ND	19.0	-0.10	
	12/09/97	ND	20.2	-0.04	
	12/18/97	ND	17.4	0.02	
	12/23/97	ND	20.7	0.04	
	12/30/97	ND	20.6	-0.06	
4B'	12/02/97	ND	20.4	-0.12	
	12/09/97	ND	18.4	-0.02	
	12/18/97	ND	18.3	0.06	
	12/23/97	ND	20.6	-0.05	
	12/30/97	ND	20.0	-0.10	
4C'	12/02/97	ND	20.3	-0.09	
	12/09/97	ND	20.1	-0.02	
	12/18/97	ND	17.1	0.04	
	12/23/97	ND	20.7	-0.09	
	12/30/97	ND	20.3	-0.08	
5B'	12/02/97	ND	20.4	-0.20	
	12/09/97	ND	18.4	-0.02	
	12/18/97	ND	17.8	0.11	
	12/23/97	ND	19.8	-0.14	
	12/30/97	ND	15.6	-0.07	
5C'	12/02/97	ND	20.4	-0.13	
	12/09/97	ND	20.0	-0.04	
	12/18/97	ND	17.6	0.06	
	12/23/97	ND	20.6	-0.15	
	12/30/97	ND	20.8	-0.08	
6B'	12/02/97	ND	20.5	-0.05	
	12/09/97	ND	17.8	-0.01	
	12/18/97	ND	17.8	0.04	
	12/23/97	ND	20.6	0.10	
	12/30/97	ND	19.4	-0.02	
6C'	12/02/97	ND	20.4	-0.04	
	12/09/97	ND	19.8	-0.02	
	12/18/97	ND	15.7	0.03	
	12/23/97	ND	20.6	0.07	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C'	12/30/97	ND	20.3	-0.04	
7B'	12/02/97	ND	20.4	-0.03	
	12/09/97	ND	16.3	-0.01	
	12/18/97	ND	11.4	0.01	
	12/23/97	ND	20.6	0.05	
	12/30/97	ND	14.2	ND	
7C'	12/02/97	ND	17.3	-0.02	
	12/09/97	ND	20.2	-0.03	
	12/18/97	ND	11.1	0.02	
	12/23/97	ND	20.6	0.05	
	12/30/97	ND	14.4	-0.02	
8B'	12/02/97	ND	20.4	-0.05	
	12/09/97	ND	20.2	-0.02	
	12/18/97	ND	16.4	0.12	
	12/23/97	ND	20.7	-0.12	
	12/30/97	ND	20.9	-0.03	
8C'	12/02/97	ND	20.3	ND	
	12/09/97	ND	19.8	-0.04	
	12/18/97	ND	16.7	0.06	
	12/23/97	ND	20.6	-0.04	
	12/30/97	ND	20.9	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
12/02/97	P-1	ND	20.4	ND	-0.10	ND	62	0	
12/02/97	P-2	ND	19.6	0.7	-0.10	ND	61	0	
12/02/97	P-3	ND	20.1	0.5	-0.12	ND	62	0	
12/02/97	P-4	ND	17.6	2.8	-0.16	ND	61	0	
12/02/97	P-5	ND	19.1	0.7	-0.16	ND	61	0	
12/02/97	P-6	ND	15.7	3.8	-0.16	ND	62	0	
12/02/97	P-7	ND	20.4	ND	-0.17	ND	61	0	
12/02/97	P-10	ND	12.8	6.9	-0.18	-0.04	78	4	
12/02/97	P-11	ND	15.1	4.2	-0.18	ND	62	0	
12/02/97	P-13	ND	20.4	ND	-0.18	ND	62	0	
12/02/97	P-14	ND	19.6	1.8	-0.18	ND	61	0	
12/02/97	P-15	ND	20.4	ND	-0.18	ND	62	0	
12/02/97	P-16	ND	19.5	0.8	-0.18	ND	62	0	
12/02/97	P-17	ND	20.4	ND	-0.18	ND	61	0	
12/02/97	P-18	ND	18.8	1.8	-0.18	ND	62	0	
12/02/97	P-19	ND	12.2	6.6	-0.18	-0.04	67	2	
12/02/97	P-20	ND	18.4	2.6	-0.18	ND	63	0	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
12/02/97	P-21	ND	14.7	4.5	-0.18	-0.02	68	2	
12/02/97	P-22	ND	20.4	ND	-0.20	ND	62	0	
12/02/97	P-23	4.4	10.2	10.6	-0.20	-0.14	108	8	
12/02/97	P-24	8.8	13.9	8.7	-0.20	-0.14	116	12	
12/02/97	P-25	6.2	10.6	11.5	-0.20	-0.15	121	12	
12/02/97	P-26	ND	20.4	ND	-0.22	ND	62	0	
12/02/97	P-27	ND	19.3	1.4	-0.22	-0.02	66	1	
12/02/97	P-28	5.7	5.1	17.0	-0.20	-0.17	107	8	
12/02/97	P-29	2.0	13.8	6.9	-0.20	-0.17	111	12	
12/02/97	P-30	1.4	13.5	6.7	-0.20	-0.16	109	8	
12/02/97	P-31	ND	18.7	1.8	-0.20	0.02	61	1	
12/02/97	P-32	ND	18.7	1.7	-0.18	0.02	58	1	
12/02/97	P-33	ND	17.4	3.1	-0.18	0.04	61	1	
12/02/97	P-34	ND	17.6	1.8	-0.18	0.04	59	0	
12/02/97	P-35	0.2	12.2	6.2	-0.16	-0.08	92	4	
12/02/97	P-36	ND	16.8	2.8	-0.16	0.02	82	1	
12/02/97	P-37	ND	16.9	2.6	-0.14	0.01	61	0	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
12/02/97	P-38	0.3	11.8	7.8	-0.14	0.08	58	1	
12/02/97	P-39	ND	18.2	1.0	-0.12	0.02	57	0	
12/02/97	W-1	13.5	2.1	24.1	-0.68	-0.14	64	NT	
12/02/97	W-2	9.0	3.0	21.3	NT	-0.08	62	NT	
12/02/97	W-3	18.2	8.4	17.6	NT	-0.14	64	NT	
12/02/97	W-4	21.1	1.9	27.1	NT	-0.25	68	NT	
12/02/97	W-5	ND	17.8	1.8	NT	-0.62	63	NT	
12/02/97	W-6	13.0	2.0	22.6	-0.70	-0.12	64	NT	
12/02/97	W-7	31.2	3.3	27.6	-0.70	-0.64	69	NT	
12/02/97	W-8	13.1	2.7	24.1	NT	-0.14	64	NT	
12/02/97	W-9	15.4	2.0	24.6	NT	-0.10	64	NT	
12/02/97	W-10	13.4	2.0	23.9	-0.72	-0.09	64	NT	
12/02/97	W-11	13.1	2.0	22.9	NT	-0.09	64	NT	
12/02/97	W-12	13.0	2.7	22.8	NT	-0.33	64	NT	
12/02/97	W-13	11.6	3.1	21.1	NT	-0.19	63	NT	
12/02/97	W-14	9.2	5.1	17.6	NT	-0.16	64	NT	
12/02/97	W-15	ND	20.1	ND	-0.85	-0.09	62	NT	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0109003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
12/02/97	W-16	24.1	1.6	26.3	-1.20	-0.36	63	48	
12/02/97	W-17	25.5	2.0	29.2	-1.20	-1.00	59	76	
12/02/97	W-18	14.7	1.5	24.5	-1.20	-0.30	61	86	
12/02/97	W-20	24.0	1.6	29.7	-1.20	-0.39	66	29	
12/02/97	W-21	25.4	2.0	28.7	-1.20	-1.10	98	40	
12/02/97	W-23	24.1	1.8	27.9	-37.0	-1.60	62	86	
12/02/97	W-24	11.2	12.1	12.0	-32.0	-0.26	66	14	
12/02/97	W-25	47.4	2.1	36.8	-32.0	-28.2	91	480	
12/02/97	W-26	6.1	4.1	15.8	-24.0	-0.50	78	57	
12/02/97	W-27	30.7	6.5	26.8	-37.0	-15.4	74	209	ADJUSTED TO -5.0
12/02/97	W-28	24.3	2.6	23.8	-32.0	-4.50	74	57	
12/02/97	W-28A	26.8	1.8	31.6	-32.0	-0.41	109	32	
12/02/97	W-28B	14.1	3.1	23.4	-32.0	-1.00	119	105	
12/02/97	W-29	24.7	2.7	26.2	-23.0	-4.50	62	NT	
12/02/97	W-29A	8.7	1.5	19.0	-0.45	-0.34	63	38	
12/02/97	W-30	22.8	2.8	26.6	-28.0	-5.00	67	180	
12/02/97	W-31	34.6	3.1	29.8	-28.0	-13.0	74	44	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0, 003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
12/02/97	W-32	18.5	1.7	25.7	-28.0	-0.12	68	12	
12/02/97	W-33	19.7	6.2	20.8	-24.0	-16.0	66	380	
12/02/97	W-36	31.4	3.1	30.4	-24.0	-9.00	104	209	
12/02/97	W-37	26.9	2.8	27.8	-24.0	-8.50	86	171	
12/02/97	W-37A	11.3	2.3	23.7	-8.00	-0.12	94	12	
12/02/97	W-37B	5.4	2.9	20.7	-0.02	-0.02	89	0	
12/02/97	W-38	23.2	1.7	27.4	-21.0	-2.60	59	NT	
12/02/97	W-38A	20.0	5.6	18.0	-16.5	-6.00	62	152	
12/02/97	W-38B	32.1	1.2	31.0	-0.16	-0.14	76	14	
12/02/97	W-39	ND	19.5	0.8	-21.0	-9.00	64	38	ADJUSTED TO -3.0; VALVE 5% OPEN
12/02/97	W-40	ND	20.2	ND	-20.0	ND	54	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							121		
Minimum:							54		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
12/02/97	23.3	3.3	-34.0	10.2	700	1550	750
12/09/97	24.1	2.9	-37.0	11.0	730	1550	349
12/18/97	29.8	3.4	-36.0	12.6	820	1550	339
12/23/97	21.8	4.0	-36.5	11.2	750	1550	183
12/30/97	30.7	3.6	-33.1	11.0	830	1548	74
=====	=====	=====	=====	=====	=====	=====	=====
Total:							1695
Minimum:						1548	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column

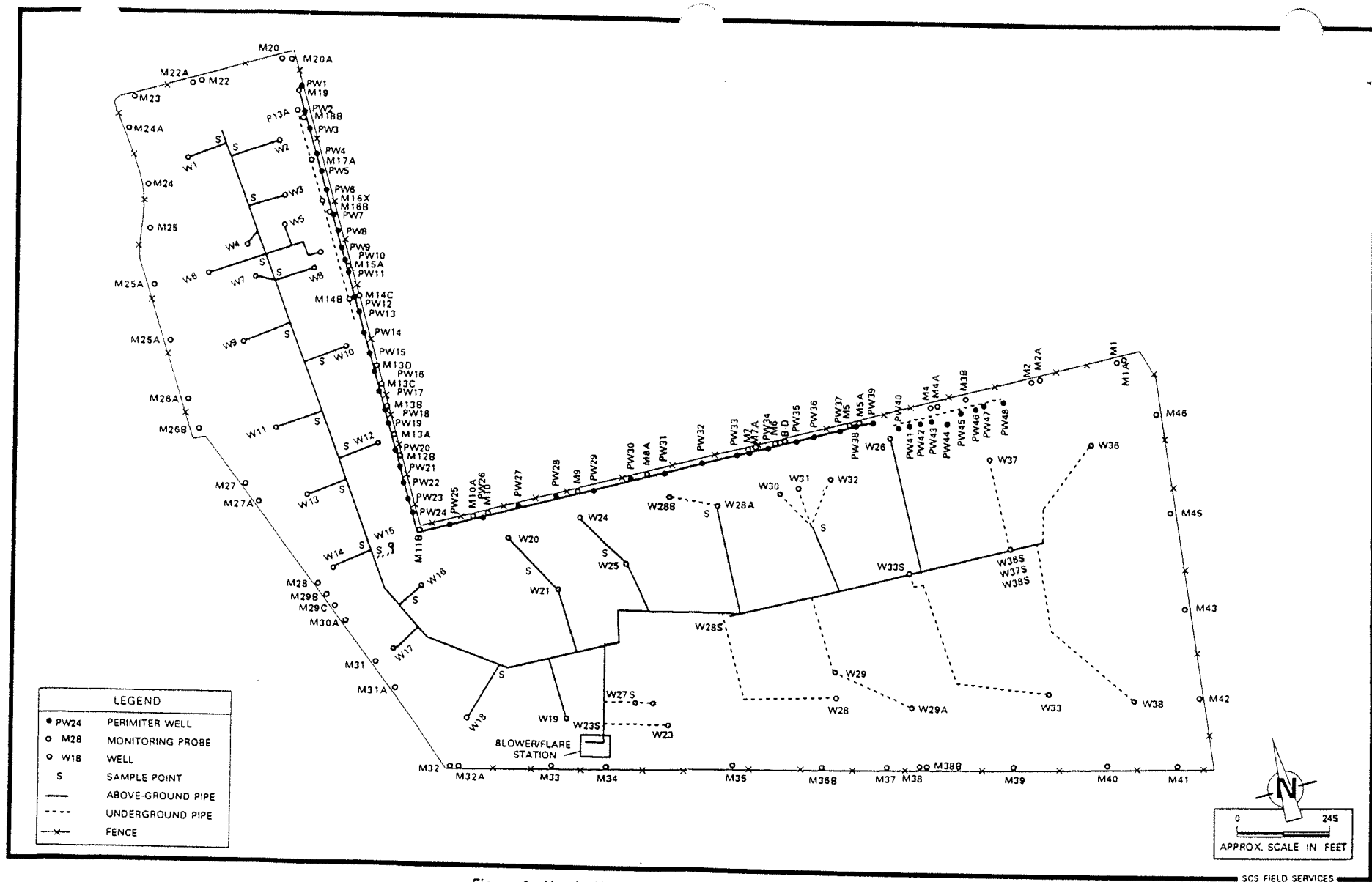


Figure 1. Hewitt North Hollywood/Probes and Well Field.

**SCS FIELD SERVICES, INC.**

February 23, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of January 1 through 31, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected at any of the monitoring wells tested with the exception of Probe Nos. 9, 16A, and 41 which had methane readings of 4.3, 2.8, and 0.8 percent by volume, respectively. These probes will be closely monitored during the next reporting period. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 10,191 gallons as measured at the flare inlet flow meter.
- On January 2, 1998, SCS-FS met with an employee from GCE to assist and inspect the water trap sumps on-site. A list of repairs was generated. Also, repair and replacement of an 8-inch ITC flex hose for the intake side of the blower was conducted.
- On January 6, 1998, SCS-FS attended of an on-site meeting to discuss repairs on the header line for Well Nos. 1 through 19. A site walk was performed to note low points and damaged pipes.

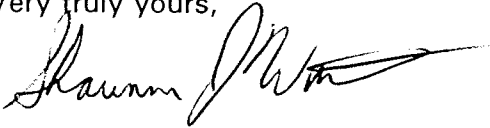


Mr. George Cosby  
February 23, 1998  
Page Two

- On January 20, 1998, SCS-FS was on-site to complete the monthly monitoring and discovered an air leak coming from either the header line or well heads for the "dog leg" system. SCS-FS conducted troubleshooting later in the reporting period and found a break at the end of the "dog leg" header.
- SCS-FS was on-site January 27 and 28, 1998, to discover the system was down and would not restart. The pilot/ignitor was malfunctioning. SCS-FS and GCE troubleshooted the problem without success. On January 28, 1998, SCS-FS, GCE, and an electrical subcontractor repaired the pilot/ignitor and the system was restarted without incident.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Shaunna J. Watterson', with a stylized flourish at the end.

Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

## SCS FIELD SERVICES, INC.

February 23, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of January 1 through 31, 1998.

### Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

### Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



Mr. George Cosby  
February 23, 1998  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, no methane gas was detected at any of the LFG monitoring wells tested with the exception of Probe Nos. 9, 16A, and 41 which had methane readings of 4.3, 2.8, and 0.8 percent gas by volume, respectively. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

Mr. George Cosby  
February 23, 1998  
Page Three

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells (see Table 2) indicated that a significant number of wells exhibited an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 43 to 123 degrees Fahrenheit (see Table 2). These temperatures are in the normal range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

Mr. George Cosby  
February 23, 1998  
Page Four

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, one unscheduled shut-down occurred and is discussed below:

- SCS-FS was on-site January 27, 1998, and discovered the flare system down and would not restart. The pilot/ignitor was malfunctioning. SCS-FS and GCE troubleshooted the problem without success. On January 28, 1998, SCS-FS, GCE, and an electrical subcontractor repaired the pilot/ignitor and the system was restarted.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1550 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 10,191 gallons as measured by the flare inlet flow meter.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

On January 2, 1998, SCS-FS met with an employee from GCE to assist and inspect the water trap sumps on-site. A repair list was generated. Also, repair and replacement of an 8-inch ITC flex hose was performed on the perimeter header line.

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

Mr. George Cosby  
February 23, 1998  
Page Five

SCS-FS personnel met with Mr. Cosby on January 6, 1998, to discuss repairs on the header line for Well Nos. 1 through 19. SCS-FS noted low points and damaged pipe that will require repair. In addition, on January 20, 1998, SCS-FS discovered a break on either of the header lines or well heads along the "dog leg" portion of the system. Troubleshooting indicated a break at the end of the header line.

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. SCS-FS performed the quarterly observation with minor repairs of deficiencies completed as needed. The next quarterly site observation is scheduled to be conducted in April 1998.

#### Standard Provisions

This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

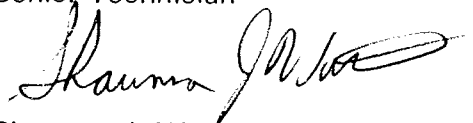
Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

Mr. George Cosby  
February 23, 1998  
Page Six

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,

  
Michael A. Braun  
Senior Technician

  
Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	01/06/98	ND	18.9	-0.04	
	01/13/98	ND	19.9	-0.01	
	01/20/98	ND	20.4	0.02	
	01/27/98	ND	19.8	ND	
1A	01/06/98	ND	19.1	-0.03	
	01/13/98	ND	18.7	-0.02	
	01/20/98	ND	18.4	0.04	
	01/27/98	ND	18.8	ND	
2	01/06/98	ND	20.7	ND	
	01/13/98	ND	19.8	ND	
	01/20/98	ND	20.1	0.01	
	01/27/98	ND	17.4	0.01	
2A	01/06/98	ND	20.4	-0.01	
	01/13/98	ND	19.9	ND	
	01/20/98	ND	19.4	0.02	
	01/27/98	ND	17.3	0.01	
3B	01/06/98	ND	20.3	-0.01	
	01/13/98	ND	19.6	ND	
	01/20/98	ND	18.6	ND	
	01/27/98	ND	19.6	ND	
4	01/06/98	ND	20.5	-0.03	
	01/13/98	ND	19.2	ND	
	01/20/98	ND	19.9	0.02	
	01/27/98	ND	18.8	0.06	
4A	01/06/98	ND	19.8	-0.04	
	01/13/98	ND	19.4	ND	
	01/20/98	ND	20.4	0.04	
	01/27/98	ND	18.4	0.04	
5	01/06/98	ND	20.7	-0.19	
	01/13/98	ND	19.9	-0.17	
	01/20/98	ND	18.4	-0.04	
	01/27/98	ND	14.2	ND	
5A	01/06/98	ND	20.5	0.05	
	01/13/98	ND	19.7	-0.04	
	01/20/98	ND	19.2	-0.03	
	01/27/98	ND	19.6	ND	
6B	01/06/98	ND	19.8	-0.29	
	01/13/98	ND	18.3	-0.18	
	01/20/98	ND	19.2	-0.04	
	01/27/98	ND	18.1	ND	
6C	01/06/98	ND	19.4	-0.02	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C	01/13/98	ND	17.8	ND	
	01/20/98	ND	18.7	ND	
	01/27/98	ND	17.6	0.01	
6D	01/06/98	ND	20.5	0.15	
	01/13/98	ND	19.8	-0.14	
	01/20/98	ND	19.1	-0.06	
	01/27/98	ND	18.8	ND	
7	01/06/98	ND	20.9	0.15	PLUGGED
	01/13/98	ND	19.9	ND	PARTIALLY PLUGGED
	01/20/98	ND	20.4	ND	PARTIALLY PLUGGED
	01/27/98	ND	20.4	ND	
7A	01/06/98	ND	20.4	-0.08	
	01/13/98	ND	20.0	-0.07	
	01/20/98	ND	20.4	ND	
	01/27/98	ND	20.2	ND	
8A	01/06/98	ND	17.9	-0.07	
	01/13/98	ND	18.9	-0.11	
	01/20/98	ND	19.2	-0.04	
	01/27/98	ND	8.8	-0.01	
9	01/06/98	ND	19.5	-0.16	
	01/13/98	ND	20.1	-0.20	
	01/20/98	ND	20.2	-0.12	
	01/27/98	4.3	2.1	ND	
10	01/06/98	ND	18.3	-0.12	
	01/13/98	ND	19.9	ND	
	01/20/98	ND	19.4	-0.04	
	01/27/98	ND	14.8	0.04	
10A	01/06/98	ND	20.7	-0.04	
	01/13/98	ND	20.0	-0.02	
	01/20/98	ND	20.1	-0.02	
	01/27/98	ND	16.2	ND	
11B	01/06/98	ND	20.8	-0.15	
	01/13/98	ND	20.2	-0.04	
	01/20/98	ND	19.9	-0.06	
	01/27/98	ND	19.1	-0.01	
12B	01/06/98	ND	20.3	-0.14	
	01/13/98	ND	20.0	-0.08	
	01/20/98	ND	20.1	-0.01	
	01/27/98	ND	20.2	ND	
13B	01/06/98	ND	20.8	-0.08	
	01/13/98	ND	20.2	-0.09	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
13B	01/20/98	ND	20.3	-0.02	
	01/27/98	ND	20.2	ND	
13D	01/06/98	ND	18.3	-0.08	
	01/13/98	ND	20.2	-0.06	
	01/20/98	ND	20.1	-0.03	
	01/27/98	ND	20.2	ND	
13C	01/06/98	ND	19.3	-0.10	
	01/13/98	ND	20.0	-0.04	
	01/20/98	ND	20.2	-0.03	
	01/27/98	ND	19.0	ND	
13X	01/06/98	ND	20.8	ND	
	01/13/98	ND	20.2	ND	
	01/20/98	ND	20.7	ND	
	01/27/98	ND	19.8	ND	
14B	01/06/98	ND	20.9	1.60	PLUGGED
	01/13/98	ND	20.3	0.04	PARTIALLY PLUGGED
	01/20/98	ND	20.2	0.01	
	01/27/98	ND	20.4	1.00	PARTIALLY PLUGGED
14C	01/06/98	ND	19.6	-0.04	
	01/13/98	ND	19.1	0.02	
	01/20/98	ND	20.7	0.02	PARTIALLY PLUGGED
	01/27/98	ND	19.2	ND	
15A	01/06/98	ND	20.9	0.74	PLUGGED
	01/13/98	ND	20.3	0.04	PARTIALLY PLUGGED
	01/20/98	ND	20.4	0.02	PARTIALLY PLUGGED
	01/27/98	ND	20.4	1.10	PARTIALLY PLUGGED
16A	01/06/98	ND	15.9	-0.12	
	01/13/98	ND	13.7	-0.12	
	01/20/98	ND	10.2	-0.08	
	01/27/98	2.8	8.4	ND	
16X	01/06/98	ND	20.0	ND	
	01/13/98	ND	19.7	ND	
	01/20/98	ND	20.3	ND	
	01/27/98	ND	19.2	ND	
17A	01/06/98	ND	16.4	-0.06	
	01/13/98	ND	14.6	-0.04	
	01/20/98	ND	12.4	0.03	
	01/27/98	ND	19.8	ND	
18B	01/06/98	ND	13.3	-0.04	
	01/13/98	ND	11.2	ND	
	01/20/98	ND	9.4	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
18B	01/27/98	ND	7.3	ND	
19	01/06/98	ND	19.9	-0.01	
	01/13/98	ND	17.4	ND	
	01/20/98	ND	14.7	ND	
	01/27/98	ND	19.2	0.01	
20	01/06/98	ND	19.7	-0.02	
	01/13/98	ND	18.6	ND	
	01/20/98	ND	17.9	0.01	
	01/27/98	ND	17.2	0.02	
20A	01/06/98	ND	18.9	-0.02	
	01/13/98	ND	18.4	-0.02	
	01/20/98	ND	18.1	ND	
	01/27/98	ND	17.6	0.02	
22	01/06/98	ND	19.6	-0.01	
	01/13/98	ND	18.4	ND	
	01/20/98	ND	18.4	0.02	
	01/27/98	ND	16.8	0.04	
22A	01/06/98	ND	19.5	-0.02	
	01/13/98	ND	18.8	-0.02	
	01/20/98	ND	18.7	ND	
	01/27/98	ND	17.3	0.08	
23	01/06/98	ND	20.1	0.03	PARTIALLY PLUGGED
	01/13/98	ND	19.4	0.08	
	01/20/98	ND	19.2	ND	
	01/27/98	ND	20.1	0.04	
24	01/06/98	ND	19.6	-0.02	
	01/13/98	ND	20.1	-0.02	
	01/20/98	ND	19.8	ND	
	01/27/98	ND	19.8	ND	
24A	01/06/98	ND	19.5	-0.04	
	01/13/98	ND	20.0	-0.03	
	01/20/98	ND	18.6	ND	
	01/27/98	ND	11.8	0.01	
25	01/06/98	ND	20.7	-0.01	
	01/13/98	ND	20.1	-0.04	
	01/20/98	ND	19.7	ND	
	01/27/98	ND	19.2	ND	
25A	01/06/98	ND	18.9	-0.02	
	01/13/98	ND	20.1	-0.04	
	01/20/98	ND	18.8	-0.02	
	01/27/98	ND	19.4	0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26	01/06/98	ND	20.7	-0.03	
	01/13/98	ND	20.1	-0.05	
	01/20/98	ND	19.8	-0.01	
	01/27/98	ND	12.6	ND	
26A	01/06/98	ND	20.8	-0.05	
	01/13/98	ND	20.1	-0.06	
	01/20/98	ND	20.4	-0.01	
	01/27/98	ND	20.2	ND	
26B	01/06/98	ND	20.3	ND	
	01/13/98	ND	19.3	-0.04	
	01/20/98	ND	20.1	0.01	
	01/27/98	ND	19.8	ND	
27	01/06/98	ND	19.6	0.01	
	01/13/98	ND	19.4	-0.02	
	01/20/98	ND	17.8	ND	
	01/27/98	ND	16.3	0.08	
27A	01/06/98	ND	17.7	-0.06	
	01/13/98	ND	17.3	-0.06	
	01/20/98	ND	17.4	ND	
	01/27/98	ND	16.4	0.04	
28	01/06/98	ND	20.8	ND	
	01/13/98	ND	20.0	ND	
	01/20/98	ND	20.6	ND	
	01/27/98	ND	14.8	0.02	
30A	01/06/98	ND	19.9	ND	PARTIALLY PLUGGED
	01/13/98	ND	19.4	0.08	
	01/20/98	ND	20.5	0.04	
	01/27/98	ND	16.3	0.04	
31	01/06/98	ND	20.8	0.31	PARTIALLY PLUGGED
	01/13/98	ND	20.4	0.06	
	01/20/98	ND	20.2	0.04	
	01/27/98	ND	20.1	0.09	
31A	01/06/98	ND	20.4	ND	PARTIALLY PLUGGED
	01/13/98	ND	19.7	1.10	
	01/20/98	ND	20.1	0.08	
	01/27/98	ND	19.8	0.08	
32	01/06/98	ND	20.8	0.01	
	01/13/98	ND	20.2	ND	
	01/20/98	ND	20.6	ND	
	01/27/98	ND	19.2	ND	
32A	01/06/98	ND	20.7	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	01/13/98	ND	20.4	ND	
	01/20/98	ND	20.7	ND	
	01/27/98	ND	19.8	ND	
33	01/06/98	ND	20.3	ND	
	01/13/98	ND	20.2	ND	
	01/20/98	ND	20.6	ND	
	01/27/98	ND	17.3	0.02	
34	01/06/98	ND	15.3	ND	
	01/13/98	ND	17.2	-0.01	
	01/20/98	ND	17.3	0.04	
	01/27/98	ND	17.4	0.04	
35	01/06/98	ND	20.8	ND	
	01/13/98	ND	20.1	ND	
	01/20/98	ND	20.4	ND	
	01/27/98	ND	20.1	ND	
36B	01/06/98	ND	20.2	ND	
	01/13/98	ND	19.2	-0.12	
	01/20/98	ND	19.2	0.01	
	01/27/98	ND	18.8	0.02	
37	01/06/98	ND	20.7	-0.03	
	01/13/98	ND	20.2	-0.01	
	01/20/98	ND	20.4	0.02	
	01/27/98	ND	20.2	ND	
38	01/06/98	ND	20.7	-0.02	
	01/13/98	ND	20.2	-0.14	
	01/20/98	ND	19.4	0.12	
	01/27/98	ND	14.3	0.08	
39	01/06/98	ND	20.8	0.01	PARTIALLY PLUGGED
	01/13/98	ND	20.2	0.18	PARTIALLY PLUGGED
	01/20/98	ND	20.4	1.20	
	01/27/98	ND	20.2	1.90	PARTIALLY PLUGGED
40	01/06/98	ND	20.3	ND	
	01/13/98	ND	20.1	ND	
	01/20/98	ND	20.2	0.04	
	01/27/98	ND	18.6	0.02	
41	01/06/98	ND	20.8	ND	
	01/13/98	ND	20.1	ND	
	01/20/98	ND	19.4	ND	
	01/27/98	0.8	3.2	0.02	
42	01/06/98	ND	20.5	-0.01	
	01/13/98	ND	19.2	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
42	01/20/98	ND	19.1	0.01	
	01/27/98	ND	16.4	0.02	
43	01/06/98	ND	13.5	-0.04	
	01/13/98	ND	12.2	-0.03	
	01/20/98	ND	14.2	0.04	
	01/27/98	ND	11.9	0.01	
45	01/06/98	ND	20.6	-0.07	
	01/13/98	ND	20.2	-0.09	
	01/20/98	ND	19.4	0.06	
	01/27/98	ND	12.8	ND	
46	01/06/98	ND	20.8	ND	
	01/13/98	ND	20.0	0.01	
	01/20/98	ND	19.8	0.02	
	01/27/98	ND	19.3	ND	
1B'	01/06/98	ND	20.5	-0.07	
	01/13/98	ND	20.1	-0.10	
	01/20/98	ND	16.8	-0.01	
	01/27/98	ND	12.3	0.08	
1C'	01/06/98	ND	19.2	-0.08	
	01/13/98	ND	17.3	-0.04	
	01/20/98	ND	18.4	-0.04	
	01/27/98	ND	10.8	0.11	
2B'	01/06/98	ND	20.9	-0.07	
	01/13/98	ND	20.2	-0.04	
	01/20/98	ND	20.1	-0.02	
	01/27/98	ND	19.2	0.02	
2C'	01/06/98	ND	20.8	-0.07	
	01/13/98	ND	19.9	-0.04	
	01/20/98	ND	20.4	-0.01	
	01/27/98	ND	19.4	0.02	
3B'	01/06/98	ND	20.4	-0.07	
	01/13/98	ND	19.4	-0.02	
	01/20/98	ND	19.3	-0.01	
	01/27/98	ND	20.2	ND	
3C'	01/06/98	ND	20.8	-0.07	
	01/13/98	ND	20.2	-0.06	
	01/20/98	ND	19.1	-0.02	
	01/27/98	ND	19.8	ND	
4B'	01/06/98	ND	19.9	-0.05	
	01/13/98	ND	19.8	-0.08	
	01/20/98	ND	19.8	-0.04	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
4B'	01/27/98	ND	19.8	ND	
4C'	01/06/98	ND	20.8	-0.07	
	01/13/98	ND	19.9	-0.06	
	01/20/98	ND	19.2	-0.03	
	01/27/98	ND	19.1	0.02	
5B'	01/06/98	ND	20.7	-0.03	
	01/13/98	ND	19.9	-0.13	
	01/20/98	ND	20.2	-0.05	
	01/27/98	ND	18.8	0.07	
5C'	01/06/98	ND	20.7	-0.10	
	01/13/98	ND	20.1	-0.10	
	01/20/98	ND	19.8	-0.03	
	01/27/98	ND	17.9	0.04	
6B'	01/06/98	ND	20.6	-0.04	
	01/13/98	ND	19.7	-0.04	
	01/20/98	ND	17.8	ND	
	01/27/98	ND	19.8	ND	
6C'	01/06/98	ND	20.8	-0.04	
	01/13/98	ND	19.8	-0.02	
	01/20/98	ND	17.2	ND	
	01/27/98	ND	14.2	0.02	
7B'	01/06/98	ND	18.6	-0.02	
	01/13/98	ND	20.3	ND	
	01/20/98	ND	14.2	ND	
	01/27/98	ND	19.8	ND	
7C'	01/06/98	ND	20.1	-0.02	
	01/13/98	ND	16.3	ND	
	01/20/98	ND	18.4	ND	
	01/27/98	ND	12.6	0.04	
8B'	01/06/98	ND	20.8	-0.10	
	01/13/98	ND	20.1	-0.07	
	01/20/98	ND	20.6	0.01	
	01/27/98	ND	17.3	ND	
8C'	01/06/98	ND	20.7	-0.01	
	01/13/98	ND	17.8	-0.02	
	01/20/98	ND	20.7	0.01	
	01/27/98	ND	18.4	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/20/98	P-1	ND	16.4	3.0	-0.30	0.28	62	1	
01/20/98	P-2	ND	14.1	3.9	-0.30	0.06	63	1	
01/20/98	P-3	ND	11.7	7.1	-0.32	0.34	62	1	
01/20/98	P-4	ND	11.6	6.8	-0.34	0.12	63	1	
01/20/98	P-5	ND	9.4	7.7	-0.34	0.26	62	1	
01/20/98	P-6	ND	10.2	7.8	-0.34	0.14	63	1	
01/20/98	P-7	ND	14.1	5.7	-0.34	0.06	62	1	
01/20/98	P-10	1.3	8.0	11.4	-0.34	-0.02	78	2	
01/20/98	P-11	ND	9.2	9.6	-0.38	0.15	63	2	
01/20/98	P-13	ND	11.6	7.8	-0.38	0.29	63	2	
01/20/98	P-14	ND	10.4	8.2	-0.38	0.08	64	1	
01/20/98	P-15	ND	11.7	5.7	-0.38	0.11	62	1	
01/20/98	P-16	ND	12.9	6.1	-0.38	0.11	63	1	
01/20/98	P-17	ND	10.4	6.7	-0.38	0.08	64	1	
01/20/98	P-18	ND	14.4	4.6	-0.38	0.11	63	1	
01/20/98	P-19	ND	13.2	3.2	-0.38	0.38	72	2	
01/20/98	P-20	ND	9.8	7.6	-0.38	0.11	63	1	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0.0003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/20/98	P-21	0.1	10.3	7.8	-0.38	-0.02	72	2	
01/20/98	P-22	ND	19.0	2.4	-0.38	0.02	62	1	
01/20/98	P-23	6.2	8.7	19.3	-0.38	-0.29	109	8	
01/20/98	P-24	13.2	6.8	17.0	-0.40	-0.26	118	12	
01/20/98	P-25	7.9	11.1	12.1	-0.42	-0.24	121	8	
01/20/98	P-26	ND	19.6	1.1	-0.42	0.04	63	1	
01/20/98	P-27	ND	18.9	2.8	-0.44	0.04	62	1	
01/20/98	P-28	8.4	3.0	19.0	-0.40	-0.31	123	12	
01/20/98	P-29	2.8	13.7	9.7	-0.38	-0.22	118	8	
01/20/98	P-30	2.2	12.7	8.7	-0.38	-0.18	121	6	
01/20/98	P-31	ND	20.0	0.4	-0.38	0.08	63	2	
01/20/98	P-32	ND	19.3	1.4	-0.34	0.09	62	1	
01/20/98	P-33	ND	17.2	3.9	-0.34	0.14	63	2	
01/20/98	P-34	ND	17.6	2.2	-0.34	0.12	63	2	
01/20/98	P-35	1.9	14.0	7.2	-0.34	-0.14	94	4	
01/20/98	P-36	ND	14.3	5.4	-0.34	0.06	82	2	
01/20/98	P-37	ND	18.9	2.4	-0.32	0.04	63	1	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/20/98	P-38	ND	9.1	10.4	-0.30	0.16	62	2	
01/20/98	P-39	ND	19.7	1.7	-0.30	0.06	63	1	
01/20/98	W-1	30.4	0.2	30.3	-0.03	0.04	63	NT	
01/20/98	W-2	20.8	0.4	24.6	NT	0.06	62	NT	
01/20/98	W-3	31.2	1.9	30.8	NT	0.03	61	NT	
01/20/98	W-4	35.8	ND	30.2	NT	0.04	62	NT	
01/20/98	W-5	8.2	14.2	19.4	NT	0.18	62	NT	
01/20/98	W-6	27.0	ND	27.9	-0.18	0.06	64	NT	
01/20/98	W-7	45.7	1.0	31.8	-0.24	-0.19	65	NT	
01/20/98	W-8	28.7	0.3	29.3	-0.24	0.02	64	NT	
01/20/98	W-9	29.3	0.2	28.2	NT	-0.04	63	NT	
01/20/98	W-10	28.1	ND	28.0	-0.38	0.06	62	NT	
01/20/98	W-11	22.7	ND	24.8	NT	-0.06	63	NT	
01/20/98	W-12	17.4	0.6	24.9	NT	0.04	63	NT	
01/20/98	W-13	14.3	1.8	21.3	NT	0.04	62	NT	
01/06/98	W-14	11.1	2.1	22.4	NT	-0.08	61	NT	PORT PLUGGED
01/06/98	W-15	3.9	15.8	5.3	NT	-0.12	59	NT	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/06/98	W-16	34.9	ND	35.1	-1.40	-0.41	66	57	
01/06/98	W-17	29.8	ND	35.6	-1.40	-1.40	69	76	
01/06/98	W-18	23.2	ND	30.7	-1.40	-0.34	57	48	
01/06/98	W-20	28.9	ND	34.3	-1.40	-0.58	60	29	
01/06/98	W-21	39.1	ND	37.3	-1.80	-1.30	104	32	
01/06/98	W-23	32.7	0.2	33.6	-27.5	-2.00	60	86	
01/06/98	W-24	29.4	6.7	25.4	-29.0	-0.17	58	14	
01/06/98	W-25	48.4	2.4	40.6	-29.0	-27.0	73	200	
01/06/98	W-26	8.9	5.2	18.3	-23.0	-0.73	62	48	
01/06/98	W-27	51.4	0.2	41.8	-27.5	-4.50	68	162	ADJUSTED TO -7.00
01/20/98	W-28	24.3	1.9	31.4	-24.5	-5.00	50	38	
01/06/98	W-28A	44.6	ND	38.4	-24.5	-0.42	87	20	
01/06/98	W-28B	22.3	0.8	31.8	-24.5	-0.61	94	67	
01/06/98	W-29	29.4	0.2	33.7	-24.5	-5.00	49	NT	
01/06/98	W-29A	18.7	ND	27.7	-4.50	-0.25	63	19	
01/06/98	W-30	25.7	1.8	31.6	-22.5	-13.6	48	200	
01/06/98	W-31	46.6	1.9	32.6	-22.5	-21.5	56	36	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
01/06/98	W-32	25.9	ND	30.7	-22.5	-0.30	54	16	
01/06/98	W-33	24.6	5.1	23.8	-22.0	-20.0	54	105	
01/06/98	W-36	39.9	1.2	36.1	-23.0	-10.4	72	181	
01/06/98	W-37	29.9	2.1	31.0	-23.0	-14.0	98	219	
01/06/98	W-37A	13.8	1.6	18.9	-12.4	-0.33	94	16	
01/06/98	W-37B	8.1	3.1	17.9	-0.27	-0.27	84	12	
01/06/98	W-38	29.7	1.1	32.3	-15.0	-2.00	50	NT	
01/06/98	W-38A	27.2	4.6	24.8	-8.00	-8.00	46	133	
01/06/98	W-38B	40.2	ND	35.4	-0.16	-0.16	66	10	
01/06/98	W-39	ND	19.6	ND	-15.0	-0.70	48	19	
01/06/98	W-40	ND	20.2	ND	-15.0	ND	43	NT	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							123		
Minimum:							43		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
01/06/98	22.4	5.6	-34.0	14.0	850	1550	NT
01/13/98	22.4	4.1	-33.0	12.5	770	1550	4743
01/20/98	23.1	3.9	-33.0	13.4	760	1550	2738
01/27/98	23.1	5.2	-31.0	15.5	930	1550	2710
=====	=====	=====	=====	=====	=====	=====	=====
Total:							10191
Minimum:						1550	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column



**SCS FIELD SERVICES, INC.**

March 19, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Executive Summary Regarding Operation, Monitoring, and Maintenance of  
the Landfill Gas (LFG) Migration Control Facilities, North Hollywood,  
California

Dear Mr. Cosby:

The following is an executive summary of major events (and conditions) observed during the reporting period of February 1 through 28, 1998. This summary has been prepared at your request. Attached is a report that details the major events noted below, as well as presenting test data, site background information, etc.

- No methane gas was detected at any of the monitoring wells tested with the exception of Probe No. 11B which had a methane reading of 11.6 percent by volume. No methane was detected in this probe by the end of the reporting period. The first round of LFG monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.
- No methane gas was detected beneath any of the on-site structures and storage containers tested.
- Numerous LFG extraction wells exhibited overpull conditions and elevated temperatures.
- During this and recent reporting periods, surging pressure readings have been recorded at Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39, and W-40.
- The total amount of LFG condensate injected into the on-site flare for the month was approximately 11,623 gallons as measured at the flare inlet flow meter.
- On February 4, 1998, SCS-FS responded to a flare shut-down due to high oxygen. Loose flex hoses were found and repaired and Extraction Well No. 29 was shut-off due to a damaged wellhead.
- On February 5, 1998, SCS-FS repaired the damaged wellhead for Extraction Well No. 29 and the "dog leg" portion of the header which had also been damaged near the end.

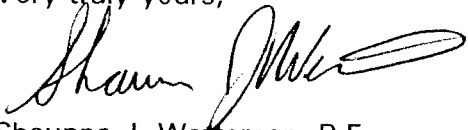


Mr. George Cosby  
March 19, 1998  
Page Two

- On February 17, 1998, Vaughan's Industrial was on-site to repair Blower No. 1.
- On February 24, 1998, SCS-FS was on-site to troubleshoot and repair problems with the valve and the pump to the field condensate system.

Should you have any questions, do not hesitate to contact Mr. Michael A. Braun or the undersigned.

Very truly yours,

A handwritten signature in black ink, appearing to read "Shaunna J. Watterson", with a stylized flourish at the end.

Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

**SCS FIELD SERVICES, INC.**

March 19, 1998  
File No. 0789003.00

Mr. George Cosby  
Cal Mat  
3200 San Fernando Road  
Los Angeles, California 90065

Subject: Operation, Monitoring, and Maintenance of the Landfill Gas (LFG) Migration Control Facilities at the former Hewitt Pit Sanitary Landfill, North Hollywood, California

Dear Mr. Cosby:

This letter provides a status report on operation, monitoring, and maintenance (O&M) performed by SCS Field Services, Inc. (SCS-FS) on the subject system. Below is a summary of testing and maintenance efforts performed for the period of February 1 through 28, 1998.

Conclusion and Recommendations

As of the date of this report, the collection system appeared to be operating satisfactorily and generally meeting the operational criteria. **Recommendations regarding repair and/or maintenance activities are contained in subsequent sections of this report. Please advise SCS-FS as soon as possible regarding implementation of these recommendations.**

Background

As you know, the Hewitt Pit property is a former organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas containing approximately 50 to 60 percent methane, 40 to 50 percent carbon dioxide and trace quantities of various other gases, some of which are odorous. The Hewitt Pit property contains systems to control the combustible gases generated in the landfill that might migrate off-site and/or otherwise be emitted to the atmosphere.

Methane gas (the combustible component of LFG) is an odorless, colorless gas lighter than air; however, methane gas produced in a landfill is typically physically associated with other gases produced by decomposition of the in-place organic materials. As a result, LFG is comprised of both odorous and non-odorous components. Methane gas can be explosive at concentrations between 5 and 15 percent by volume in air when it migrates into a confined space such as a subsurface utility vault, basement, wall space, etc., and is exposed to an ignition source. At higher concentrations, methane gas is flammable. This does not mean that methane gas in site soils poses an immediate threat of explosion, flames do not typically propagate through soils.



Mr. George Cosby  
March 19, 1998  
Page Two

### Operation Criteria

Two main operational criteria have been established for the subject system as follows:

- The LFG collection system will be operated such that no methane gas is detected at any monitoring well location.
- The flare exit gas temperature will be maintained at a minimum of 1400 degrees Fahrenheit.

A discussion of the flare exit gas operating criteria is contained in the LFG Blower/Flare Station (BFS) section of this report.

### Gas Testing

Testing for methane gas (the combustible component of LFG) was performed using a Landtec GEM-500 or comparable unit. This instrument measures combustible gas concentrations in air directly on either of two scales: the first as percent by volume of the lower explosive limit (LEL) of methane gas in air (5 percent); the other as percent by volume (0 to 100 percent) in the gas sampled. The LEL scale is most accurate for combustible gas concentrations of 5 percent or less. Pressure data was collected utilizing a Dwyer Magnehelic.

### Monitoring Well Testing

During the reporting period, no methane gas was detected at any of the LFG monitoring wells tested with the exception of Probe No. 11B which had a methane reading of 11.6 percent gas by volume. Test results and locations are shown on Table No. 1 and Figure No. 1, respectively. Blower/Flare Station and extraction well adjustments were implemented as required to control LFG migration.

The first round of monitoring well test results for the month were forwarded to the City of Los Angeles (and Cal Mat) under a separate cover.

### Storage Container/Office Testing

In accordance with the approved Work Scope, SCS-FS tests for the presence of methane gas in the void space beneath on-site structures on either a weekly (occupied structures) or monthly (unoccupied structures) basis. This testing includes the self storage containers, Cal Mat offices/home, and other on-site office trailers.

No methane gas was detected beneath any of the structures tested.

Mr. George Cosby  
March 19, 1998  
Page Three

### Extraction Well Testing

System adjustments are required whenever a monitoring well exhibits the presence of methane gas or an extraction well exhibits low methane gas quality (which could be due to an overpull condition). Overpull is when the extraction rate of a particular extraction well exceeds that of the LFG generation rate within the radius of influence of the extraction well and then air is injected into the flare. If an extreme overpull condition is allowed to continue for a long period one of two major things may occur; the first may be a drop in the methane gas content of the collected LFG (potentially reducing the flare exit gas temperature) and the second may be a subsurface landfill fire could occur.

Results of monthly testing and adjusting of the LFG extraction wells (see Table 2) indicated that a significant number of wells exhibited an overpull condition. Test locations are shown on Figure 1 (attached). This overpull condition may be necessary to maintain perimeter monitoring wells clear of methane gas. SCS-FS will attempt to adjust the system to minimize the amount of overpull while at the same time maintain monitoring wells clear of methane gas. It should be noted that some extraction wells exhibited evidence of past subsurface combustion.

In response to these overpull concerns, SCS-FS conducted a temperature survey at each of the accessible LFG extraction wells. The result of this survey indicated subsurface temperatures ranged from approximately 44 to 131 degrees Fahrenheit (see Table 2). These temperatures are in the normal to high range for anaerobic decomposition.

During testing, SCS-FS utilized a thermal anemometer to measure gas velocities at LFG extraction wells. In order to obtain actual flows from velocity measurements, the temperature, pressure, and moisture content of the gas stream must be considered. Measuring these parameters in the field is not practical. Therefore, the flow readings reported herein are approximate. Also, non-uniform flow conditions due to turbulence in header pipes causes inaccuracy. For comparison purposes, these flows are an indication of the relative flows from each extraction well in that conditions between wells are generally the same (i.e., pipe diameter, moisture content, pressure, and temperature). Some velocity readings were not taken due to moisture interference in the meter.

When summing the individual well flows, however, they may not add up to the total flow measured at the blower/flare station. The reason for the differences in flow measurement is that conditions at the blower/flare station (pipe diameter, moisture content, turbulent flow conditions, gas velocities, pressure, temperature, etc.) often vary significantly from conditions in the well field.

Mr. George Cosby  
March 19, 1998  
Page Four

#### LFG Blower/Flare Station Testing

Visual observations and testing of the LFG Blower/Flare Station (BFS) are conducted weekly. During these visits, operating parameters are monitored and mechanical and electrical components are tested for workability. Currently the flare is operated twenty four (24) hours a day. During the reporting period, one unscheduled shut-down occurred and is discussed below:

- SCS-FS was on-site February 4, 1998, to restart the flare which had shut-down due to high oxygen levels. Two flex hoses were repaired and Extraction Well No. 29 was shut-off due to damage. The flare was restarted without incident.

In addition, Vaughan's Industrial was on-site February 17, 1998, to repair Blower No. 1.

During the reporting period, the flare exit gas temperature was observed to remain well above the 1400 degree prescribed operating criteria. The lowest recorded flare temperature observed for the month was 1550 degrees Fahrenheit (see Table No. 3). All other operating parameters remained within the prescribed limits, except for conditions noted below.

The total amount of LFG condensate injected into the flare for the month was approximately 11,623 gallons as measured by the flare inlet flow meter.

#### LFG Collection System

Visual observation of the LFG control system is conducted weekly. During these visits, observations are made to ensure no pipe breakages have occurred, monitoring ports remain secure, and condensate traps remain functional, etc. Minor repairs were completed as required.

Utilizing drawings provided by Cal Mat and current operational data, SCS-FS has conducted a limited pressure drop survey (i.e., measurement of header vacuum at various points in the system). The results of this survey indicated that except for the partial blockage noted below, no major restrictions existed within the portions of the system that were accessible for survey.

SCS-FS was on-site February 24, 1998, to troubleshoot and repair problems with the valve and pumps to the field condensate system.

Mr. George Cosby  
March 19, 1998  
Page Five

During this and other reporting periods, condensate accumulation (as evidenced by surging pressure) was detected within the collection system near Extraction Well Nos. W-28, W-28A, W-28B, W-29, W-29A, W-30, W-31, W-32, W-33, W-37, W-37A, W-38, W-38A, W-39 and W-40. **SCS-FS recommends the header system near the extraction wells exhibiting surging pressures be repaired.**

#### Site Surface Observation

Visual observation of the landfill surface along the extent of the extraction system is also performed on a weekly basis. Observations for erosion, surface cracks (that might allow LFG to escape or promote air intrusion) and settlement around wells, laterals, and header lines are conducted.

During the reporting period, no significant erosion, cracking or settlement that might adversely impact (e.g., allow condensate accumulation such that a complete blockage is created) the LFG collection system operation was observed. Numerous areas of minor settlement and cracking have been observed, although these areas do not severely impact system operation, they should be observed closely to ensure they do not interrupt continued system operation.

#### Quarterly Site Observation

In accordance with the approved work scope, SCS-FS conducts quarterly observations of the LFG collection system for cracks, breakage, wear of fittings, etc. SCS-FS performed the quarterly observation with minor repairs of deficiencies completed as needed. The next quarterly site observation is scheduled to be conducted in April 1998.

#### Standard Provisions

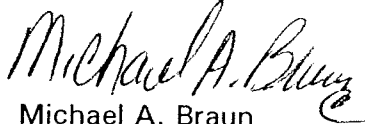
This report addresses site conditions observed only as of the monitoring dates. Accordingly, we assume no responsibility for any changes that may occur subsequent to our visit which could affect the quantity of LFG at the subject site or migration to adjacent properties.

Although SCS-FS is the primary party designated to operate and maintain the subject system, SCS-FS acknowledges that Cal Mat staff may deem it necessary to make adjustments to the system at times during the term of our Agreement. SCS-FS should be notified of any adjustments made by Cal Mat staff.

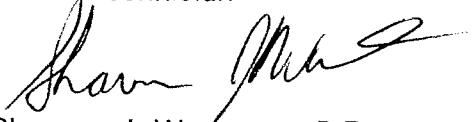
Mr. George Cosby  
March 19, 1998  
Page Six

Should you have any questions, please do not hesitate to contact either of the undersigned.

Very truly yours,



Michael A. Braun  
Senior Technician



Shaunna J. Watterson, P.E.  
Project Manager  
SCS FIELD SERVICES, INC.

SJW:vlf  
Rep\0789003

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
1	02/03/98	ND	18.9	0.08	
	02/10/98	ND	20.5	ND	
	02/17/98	ND	20.2	-0.01	
	02/24/98	ND	20.6	-0.01	
1A	02/03/98	ND	18.1	0.09	
	02/10/98	ND	19.8	ND	
	02/17/98	ND	20.0	-0.02	
	02/24/98	ND	19.3	-0.02	
2	02/03/98	ND	14.5	0.01	
	02/10/98	ND	20.5	ND	
	02/17/98	ND	20.0	-0.01	
	02/24/98	ND	19.9	ND	
2A	02/03/98	ND	16.8	0.03	
	02/10/98	ND	20.1	ND	
	02/17/98	ND	20.0	-0.02	
	02/24/98	ND	20.0	-0.02	
3B	02/03/98	ND	18.9	0.01	
	02/10/98	ND	19.1	ND	
	02/17/98	ND	16.8	-0.01	
	02/24/98	ND	17.1	-0.08	
4	02/03/98	ND	19.0	0.02	
	02/10/98	ND	20.6	-0.01	
	02/17/98	ND	20.4	-0.02	
	02/24/98	ND	19.9	ND	
4A	02/03/98	ND	18.1	0.06	
	02/10/98	ND	20.3	ND	
	02/17/98	ND	20.1	-0.01	
	02/24/98	ND	19.3	ND	
5	02/03/98	ND	8.0	0.17	
	02/10/98	ND	20.5	-0.08	
	02/17/98	ND	19.8	-0.01	
	02/24/98	ND	20.6	0.08	
5A	02/03/98	ND	19.4	0.08	
	02/10/98	ND	18.3	-0.02	
	02/17/98	ND	19.7	ND	
	02/24/98	ND	19.5	-0.05	
6B	02/03/98	ND	17.9	0.28	
	02/10/98	ND	18.8	-0.16	
	02/17/98	ND	20.0	-0.05	
	02/24/98	ND	18.0	-0.19	
6C	02/03/98	ND	17.7	0.04	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
6C	02/10/98	ND	19.4	ND	
	02/17/98	ND	19.6	-0.04	
	02/24/98	ND	18.5	-0.02	
6D	02/03/98	ND	18.0	0.08	
	02/10/98	ND	19.9	-0.11	
	02/17/98	ND	20.1	-0.06	
	02/24/98	ND	19.0	-0.19	
7	02/03/98	ND	19.2	1.29	PARTIALLY PLUGGED
	02/10/98	ND	20.5	ND	
	02/17/98	ND	19.8	0.01	
	02/24/98	ND	20.1	-0.05	
7A	02/03/98	ND	19.8	0.01	
	02/10/98	ND	20.5	-0.01	
	02/17/98	ND	20.3	ND	
	02/24/98	ND	20.6	-0.01	
8A	02/03/98	ND	18.1	0.07	
	02/10/98	ND	19.8	-0.05	
	02/17/98	ND	19.0	-0.04	
	02/24/98	ND	19.3	-0.10	
9	02/03/98	ND	19.7	-0.02	
	02/10/98	ND	20.5	-0.12	
	02/17/98	ND	20.1	-0.10	
	02/24/98	ND	20.5	-0.20	
10	02/03/98	ND	19.5	0.09	
	02/10/98	ND	20.5	-0.07	
	02/17/98	ND	20.1	-0.01	
	02/24/98	ND	20.4	-0.10	
10A	02/03/98	ND	19.6	0.03	
	02/10/98	ND	20.5	-0.02	
	02/17/98	ND	20.2	-0.02	
	02/24/98	ND	20.5	-0.03	
11B	02/03/98	11.6	0.7	0.06	
	02/10/98	ND	20.5	-0.08	
	02/17/98	ND	20.1	-0.12	
	02/24/98	ND	20.6	-0.15	
12B	02/03/98	ND	19.9	0.03	
	02/10/98	ND	20.6	-0.01	
	02/17/98	ND	20.5	ND	
	02/24/98	ND	20.6	ND	
13B	02/03/98	ND	18.8	0.12	
	02/10/98	ND	20.6	-0.03	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
13B	02/17/98	ND	20.4	-0.05	
	02/24/98	ND	20.6	-0.06	
13D	02/03/98	ND	17.2	0.10	
	02/10/98	ND	20.5	-0.05	
	02/17/98	ND	20.4	-0.08	
	02/24/98	ND	20.7	-0.04	
13C	02/03/98	ND	18.2	0.09	
	02/10/98	ND	20.5	-0.02	
	02/17/98	ND	20.3	-0.08	
	02/24/98	ND	20.6	-0.02	
13X	02/03/98	ND	19.1	0.02	
	02/10/98	ND	20.5	-0.01	
	02/17/98	ND	20.1	ND	
	02/24/98	ND	20.1	-0.02	
14B	02/03/98	ND	19.8	0.14	PARTIALLY PULLED
	02/10/98	ND	20.6	3.20	PARTIALLY PLUGGED
	02/17/98	ND	20.5	0.39	
	02/24/98	ND	20.5	0.01	
14C	02/03/98	ND	18.9	-0.01	
	02/10/98	ND	20.4	ND	
	02/17/98	ND	20.2	ND	
	02/24/98	ND	20.4	-0.01	
15A	02/03/98	ND	19.8	3.42	PARTIALLY PLUGGED
	02/10/98	ND	20.6	0.06	PARTIALLY PLUGGED
	02/17/98	ND	20.4	0.61	
	02/24/98	ND	20.6	0.03	
16A	02/03/98	ND	6.3	0.06	
	02/10/98	ND	16.6	-0.08	
	02/17/98	ND	11.1	-0.14	
	02/24/98	ND	10.5	-0.12	
16X	02/03/98	ND	16.9	0.03	
	02/10/98	ND	20.5	ND	
	02/17/98	ND	19.6	ND	
	02/24/98	ND	19.9	ND	
17A	02/03/98	ND	8.3	0.12	
	02/10/98	ND	17.8	-0.07	
	02/17/98	ND	13.6	-0.10	
	02/24/98	ND	13.2	-0.10	
18B	02/03/98	ND	9.7	0.06	
	02/10/98	ND	20.0	-0.02	
	02/17/98	ND	20.4	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
18B	02/24/98	ND	13.1	0.02	
19	02/03/98	ND	14.3	0.03	
	02/10/98	ND	20.4	-0.01	
	02/17/98	ND	18.3	-0.01	
	02/24/98	ND	17.3	0.01	
20	02/03/98	ND	17.6	0.04	
	02/10/98	ND	19.0	-0.02	
	02/17/98	ND	18.1	-0.03	
	02/24/98	ND	18.1	-0.06	
20A	02/03/98	ND	17.8	0.08	
	02/10/98	ND	18.4	-0.03	
	02/17/98	ND	18.2	-0.05	
	02/24/98	ND	18.5	-0.06	
22	02/03/98	ND	17.5	0.28	
	02/10/98	ND	18.4	-0.02	
	02/17/98	ND	17.4	-0.03	
	02/24/98	ND	18.5	-0.03	
22A	02/03/98	ND	18.3	0.03	
	02/10/98	ND	17.8	-0.04	
	02/17/98	ND	18.9	-0.06	
	02/24/98	ND	18.2	-0.04	
23	02/03/98	ND	19.4	-1.4	PARTIALLY PLUGGED
	02/10/98	ND	20.2	0.13	
	02/17/98	ND	20.4	0.25	
	02/24/98	ND	20.6	0.10	
24	02/03/98	ND	14.3	0.09	
	02/10/98	ND	20.4	-0.04	
	02/17/98	ND	20.5	-0.06	
	02/24/98	ND	20.4	-0.01	
24A	02/03/98	ND	14.2	0.08	
	02/10/98	ND	20.5	-0.07	
	02/17/98	ND	20.4	-0.06	
	02/24/98	ND	20.6	-0.04	
25	02/03/98	ND	16.8	0.06	
	02/10/98	ND	20.6	-0.04	
	02/17/98	ND	20.5	-0.02	
	02/24/98	ND	20.7	-0.04	
25A	02/03/98	ND	17.3	0.14	
	02/10/98	ND	20.5	-0.10	
	02/17/98	ND	20.5	-0.02	
	02/24/98	ND	20.6	-0.03	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
26	02/03/98	ND	17.4	0.07	
	02/10/98	ND	20.6	-0.09	
	02/17/98	ND	20.4	-0.02	
	02/24/98	ND	20.5	-0.04	
26A	02/03/98	ND	18.2	0.10	
	02/10/98	ND	20.5	-0.09	
	02/17/98	ND	20.5	-0.04	
	02/24/98	ND	20.7	-0.02	
26B	02/03/98	ND	17.7	0.12	
	02/10/98	ND	20.5	-0.08	
	02/17/98	ND	20.4	-0.05	
	02/24/98	ND	20.7	0.01	
27	02/03/98	ND	18.4	ND	
	02/10/98	ND	20.5	-0.04	
	02/17/98	ND	20.3	ND	
	02/24/98	ND	20.1	ND	
27A	02/03/98	ND	17.7	0.07	
	02/10/98	ND	19.5	-0.07	
	02/17/98	ND	19.4	-0.01	
	02/24/98	ND	19.6	ND	
28	02/03/98	ND	18.5	0.01	
	02/10/98	ND	20.6	-0.01	
	02/17/98	ND	20.3	-0.01	
	02/24/98	ND	16.0	ND	
30A	02/03/98	ND	19.4	0.71	
	02/10/98	ND	20.5	0.01	PARTIALLY PLUGGED
	02/17/98	ND	20.2	0.24	
	02/24/98	ND	20.4	0.10	
31	02/03/98	ND	19.4	3.8	
	02/10/98	ND	20.5	0.43	PARTIALLY PLUGGED
	02/17/98	ND	20.4	1.10	
	02/24/98	ND	20.6	0.14	
31A	02/03/98	ND	19.1	0.90	
	02/10/98	ND	19.9	0.21	PARTIALLY PLUGGED
	02/17/98	ND	19.8	0.33	
	02/24/98	ND	19.9	0.09	
32	02/03/98	ND	18.7	0.06	
	02/10/98	ND	20.4	ND	
	02/17/98	ND	20.1	-0.01	
	02/24/98	ND	20.2	0.03	
32A	02/03/98	ND	16.7	0.06	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
32A	02/10/98	ND	20.5	ND	
	02/17/98	ND	20.2	-0.04	
	02/24/98	ND	19.8	ND	
33	02/03/98	ND	12.3	0.01	
	02/10/98	ND	20.3	ND	
	02/17/98	ND	18.4	ND	
	02/24/98	ND	20.0	ND	
34	02/03/98	ND	14.7	0.20	
	02/10/98	ND	20.3	0.03	
	02/17/98	NT	NT	NT	INACCESSIBLE
	02/24/98	NT	NT	NT	INACCESSIBLE
35	02/03/98	ND	18.4	0.01	
	02/10/98	ND	20.5	0.01	
	02/17/98	ND	20.1	-0.01	
	02/24/98	ND	17.0	ND	
36B	02/03/98	ND	17.2	-0.04	
	02/10/98	ND	18.8	0.15	
	02/17/98	ND	9.6	ND	
	02/24/98	ND	6.3	-0.17	
37	02/03/98	ND	17.7	0.10	
	02/10/98	ND	20.4	0.03	
	02/17/98	ND	20.0	-0.01	
	02/24/98	ND	16.8	-0.02	
38	02/03/98	ND	6.2	0.60	
	02/10/98	ND	20.4	0.18	
	02/17/98	ND	20.0	ND	
	02/24/98	ND	19.2	-0.24	
39	02/03/98	ND	19.6	1.6	PARTIALLY PULLED
	02/10/98	ND	20.6	1.20	PARTIALLY PLUGGED
	02/17/98	NT	NT	NT	INUNDATED WITH WATER
	02/24/98	NT	NT	NT	INUNDATED WITH WATER
40	02/03/98	ND	19.6	0.03	
	02/10/98	ND	20.5	ND	
	02/17/98	ND	20.4	ND	
	02/24/98	ND	20.1	-0.01	
41	02/03/98	ND	16.7	0.05	
	02/10/98	ND	19.5	ND	
	02/17/98	ND	19.6	-0.02	
	02/24/98	ND	18.3	ND	
42	02/03/98	ND	17.7	0.10	
	02/10/98	ND	20.3	ND	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
42	02/17/98	ND	20.2	ND	
	02/24/98	ND	19.1	0.01	
43	02/03/98	ND	9.9	0.23	
	02/10/98	ND	17.4	0.02	
	02/17/98	ND	18.1	-0.02	
	02/24/98	ND	14.0	-0.05	
45	02/03/98	ND	18.9	0.26	
	02/10/98	ND	20.4	0.02	
	02/17/98	ND	19.0	-0.04	
	02/24/98	ND	20.1	-0.06	
46	02/03/98	ND	19.7	0.14	
	02/10/98	ND	20.1	ND	
	02/17/98	ND	20.1	ND	
	02/24/98	ND	20.0	ND	
1B'	02/03/98	ND	19.8	0.18	
	02/10/98	ND	20.4	-0.08	
	02/17/98	ND	20.4	-0.09	
	02/24/98	ND	20.6	-0.06	
1C'	02/03/98	ND	18.3	0.11	
	02/10/98	ND	16.5	-0.04	
	02/17/98	ND	19.3	-0.10	
	02/24/98	ND	20.6	-0.02	
2B'	02/03/98	ND	17.4	0.08	
	02/10/98	ND	20.6	-0.04	
	02/17/98	ND	20.3	-0.04	
	02/24/98	ND	20.6	-0.03	
2C'	02/03/98	ND	13.3	0.08	
	02/10/98	ND	20.6	-0.04	
	02/17/98	ND	20.4	-0.06	
	02/24/98	ND	20.7	-0.04	
3B'	02/03/98	ND	17.9	0.05	
	02/10/98	ND	20.5	-0.04	
	02/17/98	ND	20.5	-0.04	
	02/24/98	ND	20.7	-0.02	
3C'	02/03/98	ND	11.8	0.16	
	02/10/98	ND	20.6	-0.06	
	02/17/98	ND	20.3	-0.03	
	02/24/98	ND	20.6	ND	
4B'	02/03/98	ND	18.4	0.14	
	02/10/98	ND	20.6	-0.05	
	02/17/98	ND	20.4	-0.10	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 1. Hewitt Pit Monitoring Probe Data

0789003.00

Monitoring Probe	DATE	Methane [%vol]	Oxygen [%vol]	Pressure [in-W.C.]	COMMENTS
4B'	02/24/98	ND	20.6	-0.07	
4C'	02/03/98	ND	8.2	0.08	
	02/10/98	ND	20.5	-0.04	
	02/17/98	ND	20.2	-0.09	
	02/24/98	ND	20.7	-0.06	
5B'	02/03/98	ND	19.0	0.22	
	02/10/98	ND	20.5	-0.18	
	02/17/98	ND	20.3	-0.16	
	02/24/98	ND	20.3	-0.16	
5C'	02/03/98	ND	18.9	0.10	
	02/10/98	ND	15.8	-0.11	
	02/17/98	ND	19.5	-0.13	
	02/24/98	ND	20.5	-0.11	
6B'	02/03/98	ND	15.1	0.12	
	02/10/98	ND	20.5	-0.05	
	02/17/98	ND	20.4	-0.07	
	02/24/98	ND	20.5	-0.05	
6C'	02/03/98	ND	6.0	0.10	
	02/10/98	ND	20.6	-0.05	
	02/17/98	ND	20.4	-0.05	
	02/24/98	ND	20.6	-0.07	
7B'	02/03/98	ND	13.3	0.03	
	02/10/98	ND	20.4	-0.05	
	02/17/98	ND	20.3	-0.02	
	02/24/98	ND	14.1	-0.03	
7C'	02/03/98	ND	13.3	0.04	
	02/10/98	ND	20.6	-0.04	
	02/17/98	ND	16.1	-0.01	
	02/24/98	ND	20.6	-0.03	
8B'	02/03/98	ND	15.9	0.02	
	02/10/98	ND	20.5	-0.07	
	02/17/98	ND	20.4	-0.06	
	02/24/98	ND	20.7	-0.04	
8C'	02/03/98	ND	19.2	ND	
	02/10/98	ND	20.6	-0.04	
	02/17/98	ND	20.3	-0.03	
	02/24/98	ND	20.4	-0.01	

TR=Trace Amounts Detected

ND=None Detected

%vol=Percent by Volume

NT=Not Taken

in-W.C.=Inches of Water Column

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

070003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/10/98	P-1	ND	19.9	ND	-0.20	-0.08	67	1	
02/10/98	P-2	ND	20.1	ND	-0.22	0.02	68	1	
02/10/98	P-3	ND	19.8	ND	-0.22	-0.08	68	1	
02/10/98	P-4	ND	15.6	4.1	-0.26	0.03	65	1	
02/10/98	P-5	ND	20.2	ND	-0.26	0.02	71	0	
02/10/98	P-6	ND	19.4	1.7	-0.28	0.08	72	1	
02/10/98	P-7	ND	20.2	ND	-0.28	0.04	71	1	
02/10/98	P-10	1.9	9.9	11.4	-0.30	-0.02	73	2	
02/10/98	P-11	ND	15.2	6.8	-0.30	0.06	66	1	
02/10/98	P-13	ND	20.2	ND	-0.30	0.07	68	1	
02/10/98	P-14	ND	19.1	1.8	-0.30	0.11	70	1	
02/10/98	P-15	ND	20.1	ND	-0.30	0.02	71	0	
02/10/98	P-16	ND	19.8	1.6	-0.30	0.10	72	1	
02/10/98	P-17	ND	20.2	ND	-0.30	ND	76	0	
02/10/98	P-18	ND	19.4	0.9	-0.30	0.08	72	1	
02/10/98	P-19	ND	18.4	2.3	-0.30	-0.02	76	2	
02/10/98	P-20	ND	17.6	2.3	-0.30	0.05	68	1	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0709003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/10/98	P-21	ND	14.4	7.6	-0.30	ND	70	0	
02/10/98	P-22	ND	20.2	ND	-0.30	0.04	68	1	
02/10/98	P-23	2.1	13.8	7.0	-0.32	-0.20	118	8	
02/10/98	P-24	6.1	11.4	10.5	-0.32	-0.18	111	12	
02/10/98	P-25	2.7	14.5	6.8	-0.32	-0.21	106	8	
02/10/98	P-26	ND	20.2	ND	-0.32	ND	66	0	
02/10/98	P-27	ND	19.6	0.6	-0.33	ND	67	0	
02/10/98	P-28	3.6	7.2	17.6	-0.30	-0.23	131	16	
02/10/98	P-29	0.2	18.2	2.4	-0.28	-0.04	116	2	
02/10/98	P-30	1.2	13.2	7.4	-0.28	-0.19	119	12	
02/10/98	P-31	ND	20.1	ND	-0.28	0.04	66	1	
02/10/98	P-32	ND	19.9	0.6	-0.28	0.06	65	1	
02/10/98	P-33	ND	18.8	1.4	-0.28	0.07	72	2	
02/10/98	P-34	ND	19.7	0.8	-0.28	0.06	72	1	
02/10/98	P-35	0.9	15.0	5.9	-0.28	-0.14	108	8	
02/10/98	P-36	ND	16.2	4.0	-0.28	-0.01	82	1	
02/10/98	P-37	ND	20.2	ND	-0.28	ND	66	0	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

000003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/10/98	P-38	ND	14.8	6.7	-0.28	0.08	68	0	
02/10/98	P-39	ND	20.2	ND	-0.28	0.02	71	1	
02/10/98	W-1	22.3	1.3	24.6	-1.40	-0.14	64	NT	
02/10/98	W-2	13.5	1.8	23.5	NT	-0.04	62	NT	
02/10/98	W-3	26.3	4.1	28.6	NT	-0.22	63	NT	
02/10/98	W-4	30.3	0.6	29.5	NT	-0.24	63	NT	
02/10/98	W-5	36.4	1.4	31.8	NT	-0.82	58	NT	
02/10/98	W-6	19.2	0.8	26.2	-1.40	-0.20	63	NT	
02/10/98	W-7	33.1	2.6	25.4	-1.40	-1.20	72	NT	
02/10/98	W-8	14.6	1.6	28.0	NT	-0.09	61	NT	
02/10/98	W-9	18.8	0.7	26.7	NT	-0.28	63	NT	
02/10/98	W-10	10.8	1.1	24.0	-1.40	-0.29	62	NT	
02/10/98	W-11	17.1	0.2	25.2	NT	-0.24	63	NT	
02/10/98	W-12	4.2	2.1	19.6	NT	-0.14	62	NT	
02/10/98	W-13	11.4	2.4	22.0	NT	-0.78	63	NT	ADJUSTED TO -0.26
02/10/98	W-14	14.6	3.8	19.2	NT	-0.04	62	NT	
02/10/98	W-15	ND	18.6	1.1	-1.30	-0.18	63	NT	

ND=None Detected      Deg-F=degrees Fahrenheit      %-Vol=Percent by Volume  
 NT=Not Taken      cfm=Cubic feet per minute      in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1      W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0.00003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/10/98	W-16	26.0	1.2	30.4	-1.80	-0.42	74	48	
02/10/98	W-17	7.0	0.6	24.0	-1.80	-1.60	71	67	
02/10/98	W-18	16.1	0.3	26.7	-1.80	-0.26	62	57	
02/10/98	W-20	22.7	0.3	28.4	-1.60	-0.60	63	38	
02/10/98	W-21	27.8	2.1	27.9	-1.60	-1.40	109	32	
02/10/98	W-23	28.7	0.3	29.1	-36.0	-2.50	52	67	
02/10/98	W-24	12.6	8.1	11.7	-33.0	-0.16	59	10	
02/10/98	W-25	47.8	2.6	33.8	-33.0	-32.5	64	320	
02/10/98	W-26	4.9	8.9	12.6	-32.0	-1.50	66	57	
02/10/98	W-27	43.6	2.4	34.2	-36.0	-24.0	60	38	ADJUSTED TO -5.50
02/10/98	W-28	NT	NT	NT	NT	NT	NT	NT	INACCESSIBLE; UNDER VEHICLE
02/10/98	W-28A	29.1	1.2	31.2	-34.0	-0.94	93	24	
02/10/98	W-28B	15.2	2.8	22.7	-34.0	-0.93	92	76	
02/10/98	W-29	30.1	0.2	30.7	-30.0	-1.90	49	NT	
02/10/98	W-29A	12.6	10.9	13.1	-2.10	-2.10	51	48	ADJUSTED TO -0.40
02/10/98	W-30	21.4	3.4	28.4	-32.0	-17.0	61	240	
02/10/98	W-31	42.6	2.2	33.6	-32.0	-26.0	64	36	

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 2  
HEWITT PIT  
EXTRACTION WELL DATA

0789003.00

DATE	Extraction Well	Methane [%vol]	Oxygen [%vol]	Carbon Dioxide [%-Vol]	Header Pressure [in-W.C.]	Wellhead Pressure [in-W.C.]	Temperature [deg. F]	Flow [cfm]	Remarks
02/10/98	W-32	19.8	0.3	27.3	-32.0	-0.26	63	12	
02/10/98	W-33	27.6	2.9	25.6	-32.0	-25.0	64	152	
02/10/98	W-36	36.1	1.3	32.8	-32.0	-11.4	106	475	
02/10/98	W-37	21.6	4.8	24.3	-32.0	-16.5	84	380	ADJUSTED TO -11.0
02/10/98	W-37A	10.1	2.0	20.3	-10.2	-0.16	101	NT	
02/10/98	W-37B	5.7	3.1	19.2	-0.16	-0.16	88	NT	
02/10/98	W-38	27.6	0.2	30.7	-12.5	-2.70	49	NT	
02/10/98	W-38A	37.3	1.4	32.6	-12.5	-12.5	48	105	
02/10/98	W-38B	36.8	0.2	32.9	-0.22	-0.22	64	19	
02/10/98	W-39	ND	19.6	ND	-25.0	-1.35	47	0	
02/10/98	W-40	ND	20.4	ND	-25.0	ND	44	0	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Maximum:							131		
Minimum:							44		

ND=None Detected    Deg-F=degrees Fahrenheit    %-Vol=Percent by Volume  
 NT=Not Taken    cfm=Cubic feet per minute    in-W.C.=Inches of Water Column  
 P-1=Perimeter Extraction Well No. 1    W-1=Interior Extraction Well No. 1

TABLE 3  
HEWITT PIT. Flare Station Data

0789003.00

Date	Methane* [%-Vol]	Oxygen* [%-Vol]	Vacuum* [in-W.C.]	Back Press.* [in-W.C.]	Flow Data [cfm]	Exit Gas Temperature* [Deg F]	Condensate Totalizer [Gal]
02/03/98	27.1	3.2	13.4	-3.2	850	1550	3158
02/10/98	24.0	3.1	-38.0	10.0	650	1550	2934
02/17/98	23.5	2.7	-38.0	8.60	590	1552	3528
02/24/98	24.2	3.7	-39.0	8.20	563	1556	2003
=====	=====	=====	=====	=====	=====	=====	=====
Total:							11623
Minimum:						1550	

Deg F=Degrees Fahrenheit  
\* Instrument=Landtec GEM 500  
%-Vol=Percent by Volume

gal=Gallons  
cfm=Cubic Feet per Minute  
in-W.C.=Inches of Water Column

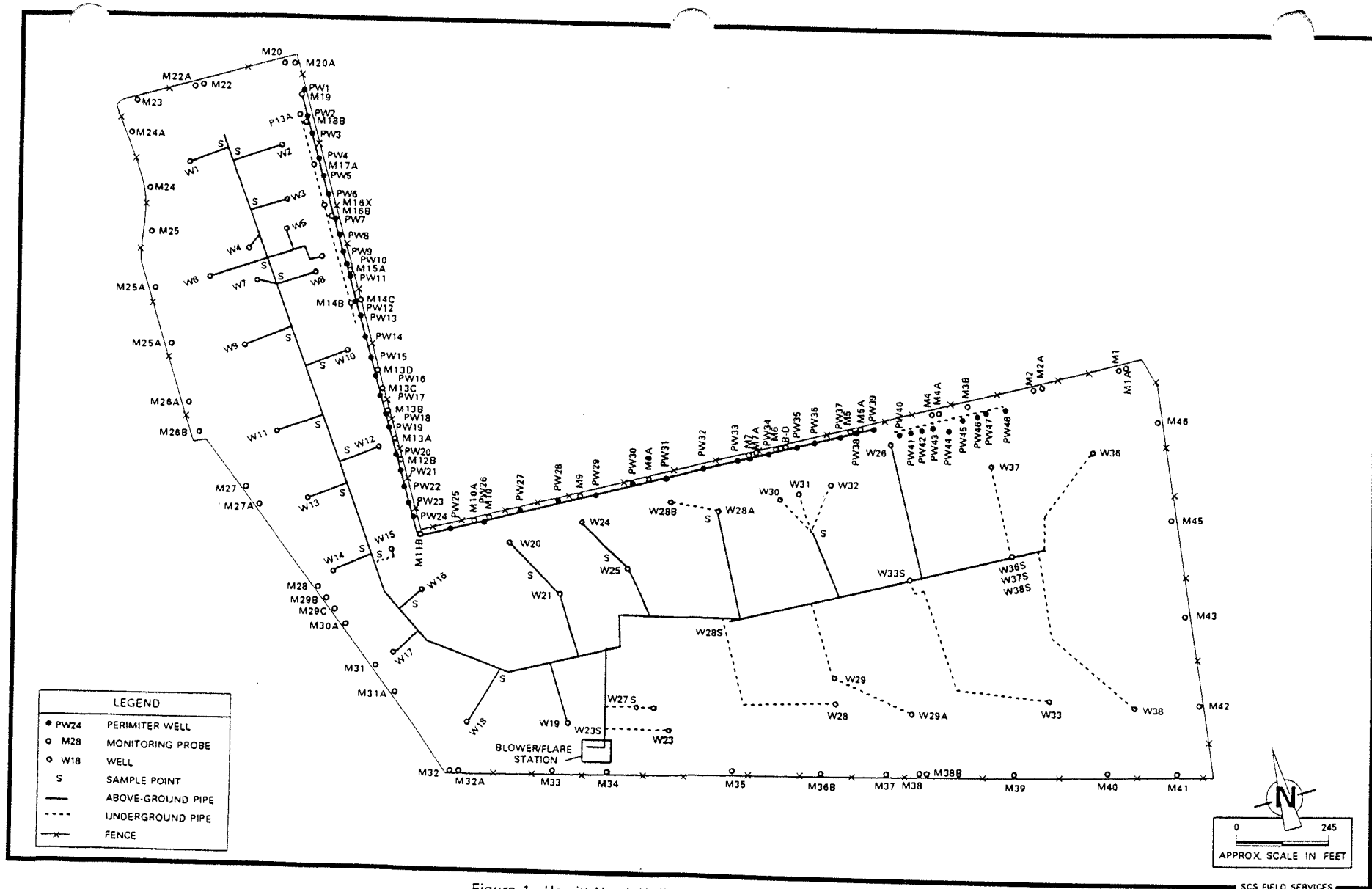


Figure 1. Hewitt North Hollywood/Probes and Well Field.





## SCS Field Services

March 28, 1988  
File No. F6887

Mr. George Cosby  
Calmat  
3200 San Fernando Boulevard  
Los Angeles, California 90065

Subject: Landfill Gas (LFG) Extraction Well Field Data from  
the Former Hewitt Pit Sanitary Landfill, Los Angeles,  
California.

Dear George:


Enclosed herewith is your copy of the Hewitt Pit LFG extraction well field print. Also enclosed is a copy of the well field data collected by our technician on March 16 and 17, 1988. A brief review of this data shows the following:

- o High well head vacuum at P5, P13, P19, P37, W3, W7, W23, W25, W36, W37, W38,
- o Line Surging at W2, W3, W4, W18, W25, W28A, W28B,
- o CO (Carbon Monoxide) at W24, W25, W28A, W28B, W34; note that not all wells were tested for CO.
- o No access to W16 for testing.

Perimeter monitoring probe data (not shown) provided by Jose' Pena showed no detectable combustible gas levels.

At your convenience, I would like to discuss how SCS Field Services (SCS-FS) might assist you with a routine well field monitoring and adjustment program. Should you have any questions regarding this data, please do not hesitate to call.

Very truly yours,

  
Galen S. Petoyan  
Vice President  
SCS FIELD SERVICES

GSP/dw

Enclosure

# LANDFILL GAS MONITORING DATA

JOB NUMBER: 90001.01  
 JOB NAME: HEWIT PIT  
 READING DATE : MARCH 16, 1988  
 PERSONNEL: M. BRAUN  
 PAGE 1 OF 2  
 PRINT DATE: 03/18/88

SCS FIELD SERVICES  
 22010 SO. WILMINGTON AVE  
 SUITE 109  
 CARSON, CALIFORNIA 90745-4307  
 (213) 835-0235

PROBE	PRESSURE (IN. W.C.)	METHANE %	OXYGEN %	LINE SIZE (IN)	REMARKS
P A	-0.04	1	16.0	3	
P B	-0.03	1	10.0	3	
P 1	-0.63	1	16.0	3	
P 2	-0.12	1	15.0	4	
P 3	-0.32	1	17.0	3	
P 4	-0.08	1	19.0	4	
P 5	-9.20	1	20.0	3	
P 6	-0.06	1	17.0	4	
P 7	-0.20	1	16.0	4	
P 8	-0.64	2	13.0	4	
P 9	-0.52	1	11.0	3	
P 10	-0.20	2	12.5	4	
P 11	-0.30	1	8.5	4	
P 12	-0.05	5	10.0	4	
P 13	-7.60	1	20.0	3	
P 14	-0.09	5	11.0	4	
P 15	-0.84	2	10.0	3	
P 16	-0.06	5	8.0	4	
P 17	-2.60	1	6.0	3	
P 18	-0.06	4	8.0	4	
P 19	-15.00	2	9.5	4	
P 20	-0.08	2	8.5	4	
P 21	-0.05	8	4.0	4	
P 22	-0.01	1	9.0	4	
P 23	-0.04	17	1.0	4	
P 24	-0.04	16	3.0	4	
P 25	-0.23	13	7.5	4	
P 26	-0.10	5	12.0	4	
P 27	-0.12	3	7.0	4	
P 28	-0.12	10	2.0	4	
P 29	-0.20	2	18.0	4	
P 30	-0.22	1	18.0	4	
P 31	-0.20	1	20.0	4	
P 32	-0.14	1	20.0	4	
P 33	-0.22	2	19.0	4	
P 34	-0.22	2	18.0	4	
P 35	-0.30	4	14.0	4	
P 36	-0.60	10	13.0	4	
P 37	-21.00	----	----	4	VAC. TOO HIGH FOR READING
P 38	-0.18	3	7.0	4	
P 39	-0.20	3	13.0	4	

# LANDFILL GAS MONITORING DATA

JOB NUMBER: 90001.01  
 JOB NAME: HEWIT PIT  
 READING DATE : MARCH 16, 1988  
 PERSONNEL: M. BRAUN  
 PAGE 2 OF 2  
 PRINT DATE: 03/18/88

SCS FIELD SERVICES  
 22010 SO. WILMINGTON AVE  
 SUITE 109  
 CARSON, CALIFORNIA 90745-4307  
 (213) 835-0235

WELL	PRESSURE (IN. W.C.)	METHANE %	OXYGEN %	LINE SIZE (IN)	REMARKS
W 1	-0.07	21	ND	6	
W 2	-0.08	20	ND	6	SURGING
W 3	-10.00	20	2.0	4	SURGING
W 4	-0.14	24	1.0	4	SURGING
W 5	-0.04	27	ND	4	
W 6	-0.30	22	ND	6	
W 7	-2.00	43	ND	4	
W 8	-0.24	16	ND	4	
W 9	0.06	39	4.0	6	
W 10	-0.01	39	ND	6	
W 11	-1.00	21	ND	6	
W 12	0.04	42	ND	6	
W 13	-0.01	20	ND	6	
W 14	0.10	24	ND	6	
W 15	-0.40	34	1.5	6	
W 16	----	----	----		
W 17	ND	32	ND	6	FENCE LOCKED NO READING
W 18	-7.00	12	2.0	6	
W 19	-0.05	39	ND	6	SURGING
W 20	0.08	27	9.0	4	
W 21	-0.06	14	ND	4	
W 22	-0.60	47	ND	6	
W 23	-21.00	16	3.0	6	
W 24	0.30	22	2.5	6	100 PPM CARBON MONOXIDE
W 25	-6.20	39	3.5	4	SURGING, 100 PPM CO
W 26	----	----	----		NO WELL
W 27	-0.80	22	3.0	6	
W 28A	-3.50	20	3.5	6	SURGING, OVER 500 PPM CO
W 28B	-1.70	11	3.0	6	SURGING, 375 PPM CO
W 30		35	4.0	4	
W 31	0.18	50	ND	4	
W 32	0.02	40	ND	4	
W 33	-0.58	31	ND	6	
W 34	-0.43	25	ND	6	190 PPM CO
W 35	----	----	----		NO WELL
W 36	-14.00	----	----	6	VAC. TOO HIGH FOR READING
W 37	-21.00	----	----	6	VAC. TOO HIGH FOR READING
W 38	-4.00	21	20.0	6	

EXECUTIVE SUMMARY

GAS PROBE MONITORING AT  
HEWITT LANDFILL

REPORT DATE ..... 28-JUL-88  
WEEKLY MONITORING PERIOD..... 5-JUL TO 26-JUL-88

SUMMARY, END OF REPORT PERIOD

NO. OF PROBES INSTALLED.....	93
NO. OF PROBES MONITORED.....	76
NO. OF PROBES WITH NO METHANE.....	76
NO. OF PROBES WITH TRACE TO 4.9% METHANE.....	0
NO. OF PROBES WITH 5 TO 15% METHANE.....	0
NO. OF PROBES WITH >15% METHANE.....	0
NO. OF PROBES REQUIRING MAINTENANCE.....	0

SEE EXHIBIT A FOR TABLE OF FLARE OPERATING CONDITIONS.

PROBES CONTAINING METHANE, END OF REPORT PERIOD

NONE

PROBES REQUIRING MAINTENANCE, END OF REPORT PERIOD

NONE

\* \* \* \* \*

Report Prepared By:

GROVESPRING ASSOCIATES, INC.

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

EXHIBIT A

MONITORING DATA  
HEWITT LANDFILL

ONE MONTH ENDING 7-26-88

1. FLARE STATION DATA

MONITORING DATE	6-28	7-5	7-12	7-20	7-26
MONITORING TIME					
FLARE TEMPERATURE, deg F	1400	1350	1450	1325	1325
VOLUME % CH <sub>4</sub>	20	19	23	23	23
VOLUME % O <sub>2</sub>	3.1	3.5	5.5	2.5	3
VACUUM, INCHES H <sub>2</sub> O	29	29	28	27	28
BACK PRESS., INCHES H <sub>2</sub> O	1	1	1	1	2
GAS FLOW RATE, INCHES H <sub>2</sub> O	0.15	0.15	0.15	0.20	0.15

2. PROBLEM PROBES

MONITORING DATE	6-28	7-5	7-12	7-20	7-26
PROBE NUMBER					

(Continued on next page)

# EXHIBIT A (Continued)

## HEWITT LANDFILL

### 3. ALL PROBES

MONITORING DATE	6-28	7-5	7-12	7-20	7-26
PROBE NUMBER					
HOUSE	0	0	0	0	0
OFFICE	0	0	0	0	0
STORAGE	0	0	0	0	0
1	0	0	0	0	0
1A	0	0	0	0	0
2	0	0	0	0	0
2A	0	0	0	0	0
3B	0	0	0	0	0
4	0	0	0	0	0
4A	0	0	0	0	0
5	0	0	0	0	0
5A	0	0	0	0	0
6B	0	0	0	0	0
6C	0	0	0	0	0
6D	0	0	0	0	0
7	0	0	0	0	0
7A	0	0	0	0	0
8A	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
10A	0	0	0	0	0
11B	0	0	0	0	0
12B	0	0	0	0	0
13A	0	0	0	0	0
13X	0	0	0	0	0
14B	0	0	0	0	0
14C	0	0	0	0	0
15A	0	0	0	0	0
16A	0	0	0	0	0
16X	0	0	0	0	0
17A	0	0	0	0	0
18B	0	0	0	0	0
19	0	0	0	0	0

(Continued on next page)

## EXHIBIT A (Continued)

HEWITT LANDFILL

## ALL PROBES (Continued)

MONITORING DATE	6-28	7-5	7-12	7-20	7-26
PROBE NUMBER					
20	0	0	0	0	0
20A	0	0	0	0	0
22	0	0	0	0	0
22A	0	0	0	0	0
23	0	0	0	0	0
24	0	0	0	0	0
24A	0	0	0	0	0
25	0	0	0	0	0
25A	0	0	0	0	0
26	0	0	0	0	0
26A	0	0	0	0	0
27	0	0	0	0	0
27A	0	0	0	0	0
28	0	0	0	0	0
29B	0	0	0	0	0
29C	0	0	0	0	0
30A	0	0	0	0	0
31	0	0	0	0	0
31A	0	0	0	0	0
32	0	0	0	0	0
32A	0	0	0	0	0
33	0	0	0	0	0
34	0	0	0	0	0
35	0	0	0	0	0
36B	0	0	0	0	0
37	0	0	0	0	0
38	0	0	0	0	0
38B	0	0	0	0	0
39	0	0	0	0	0
40	0	0	0	0	0
41	0	0	0	0	0
42	0	0	0	0	0

(Continued on next page)

EXHIBIT A (Continued)

HEWITT LANDFILL

ALL PROBES (Continued)

MONITORING DATE	6-28	7-5	7-12	7-20	7-26
PROBE NUMBER					
43	0	0	0	0	0
44A	0	0	0	0	0
45	0	0	0	0	0
46	0	0	0	0	0
B1B	0	0	0	0	0
B1C	0	0	0	0	0
B2B	0	0	0	0	0
B2C	0	0	0	0	0
B3B	0	0	0	0	0
B3C	0	0	0	0	0
B4B	0	0	0	0	0
B4C	0	0	0	0	0
B5B	0	0	0	0	0
B5C	0	0	0	0	0
B6B	0	0	0	0	0
B6C	0	0	0	0	0
B7B	0	0	0	0	0
B7C	0	0	0	0	0
B8B	0	0	0	0	0
B8C	0	0	0	0	0

Report Prepared By:

GROVESPRING ASSOCIATES, INC.

GROVESPRING ASSOCIATES, INC.  
(213) 377-8753

EXHIBIT B

FLARE TEMPERATURE DATA  
HEWITT LANDFILL  
SIX MONTHS ENDING 8-1-88

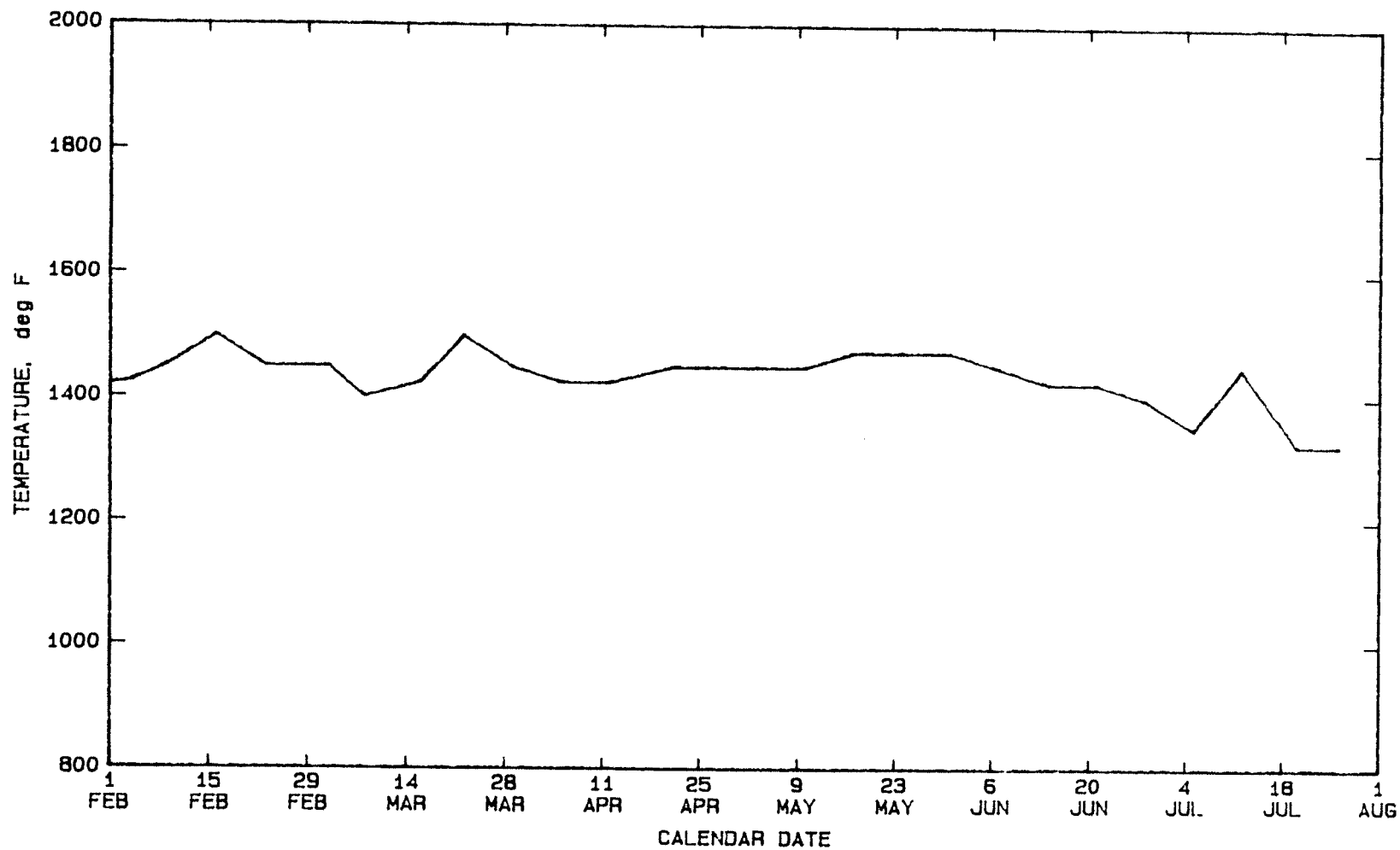


EXHIBIT C

FLARE STATION GAS COMPOSITION  
HEWITT LANDFILL  
SIX MONTHS ENDING 8-1-88

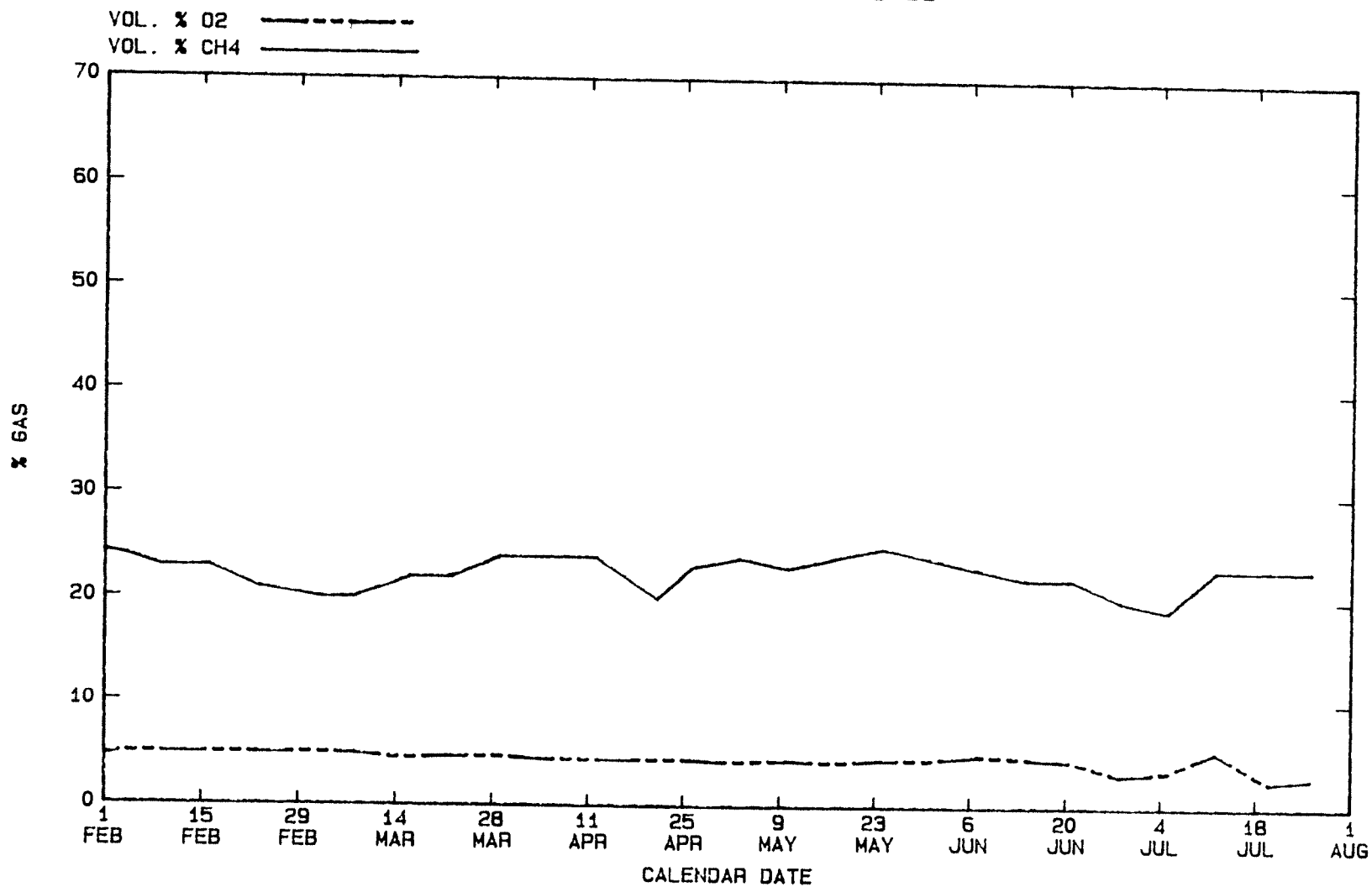


EXHIBIT D  
 BLOWER PRESSURES  
 HEWITT LANDFILL  
 SIX MONTHS ENDING 8-1-88

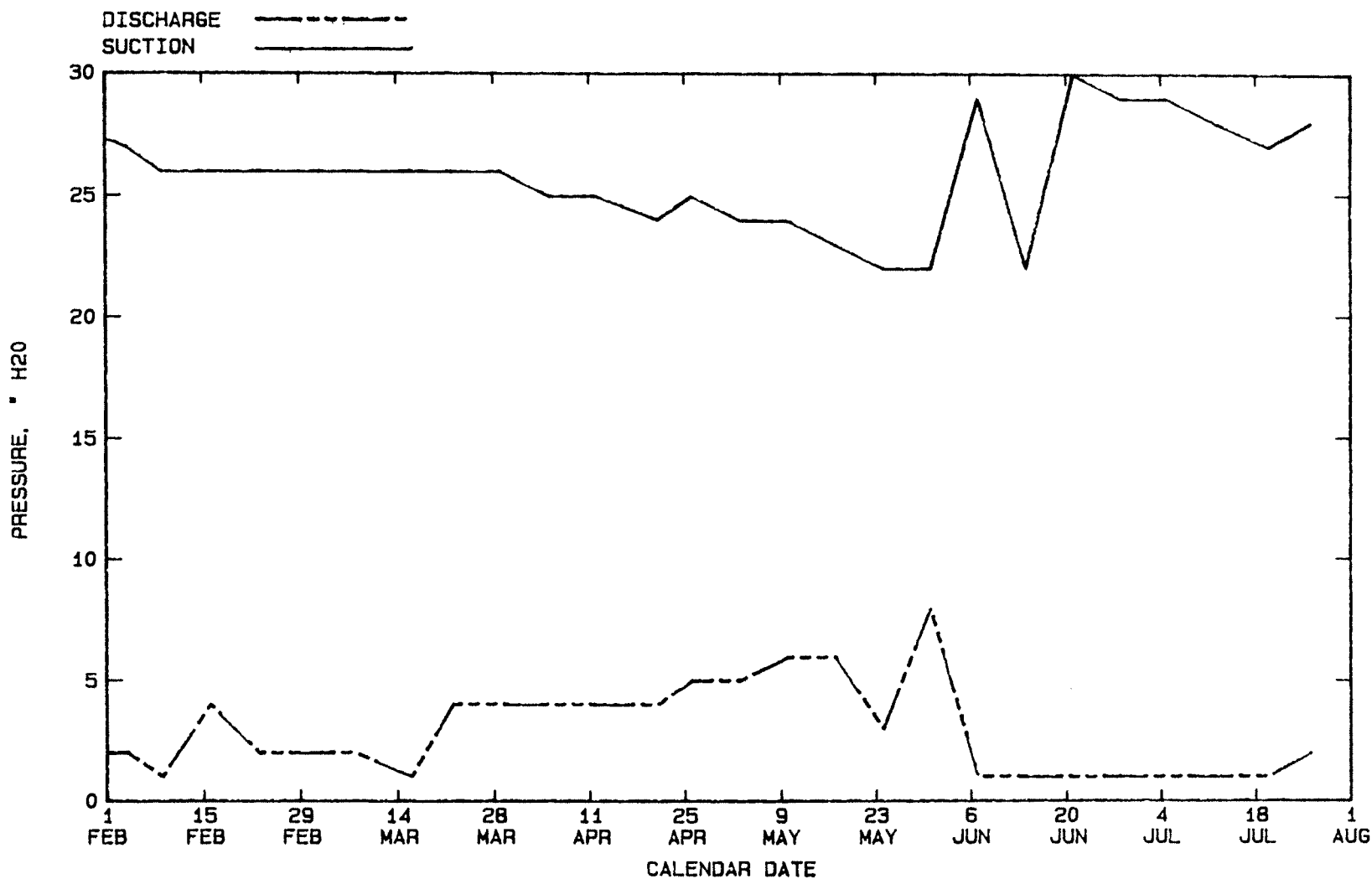
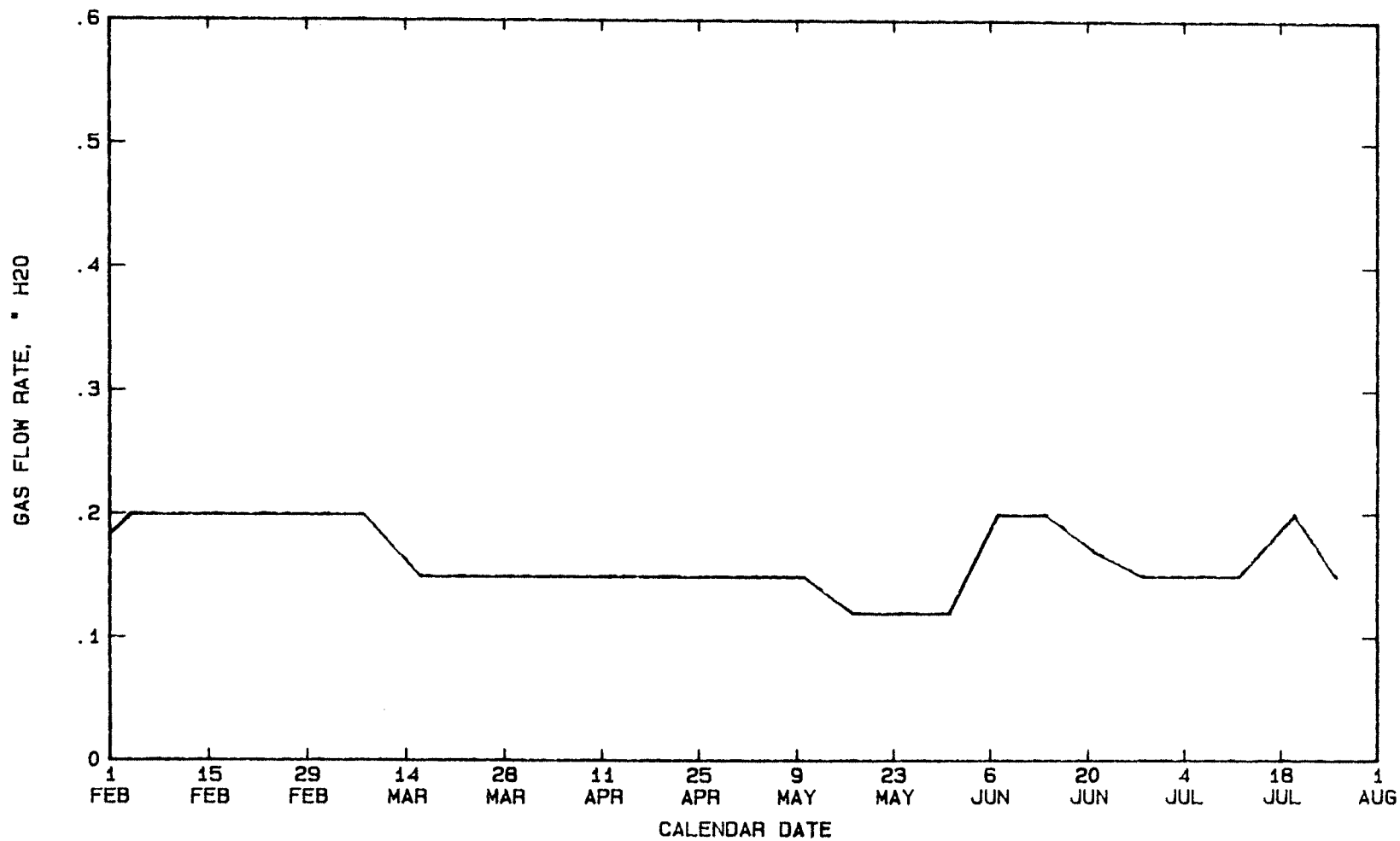


EXHIBIT E  
GAS FLOW RATE  
HEWITT LANDFILL  
SIX MONTHS ENDING 8-1-88



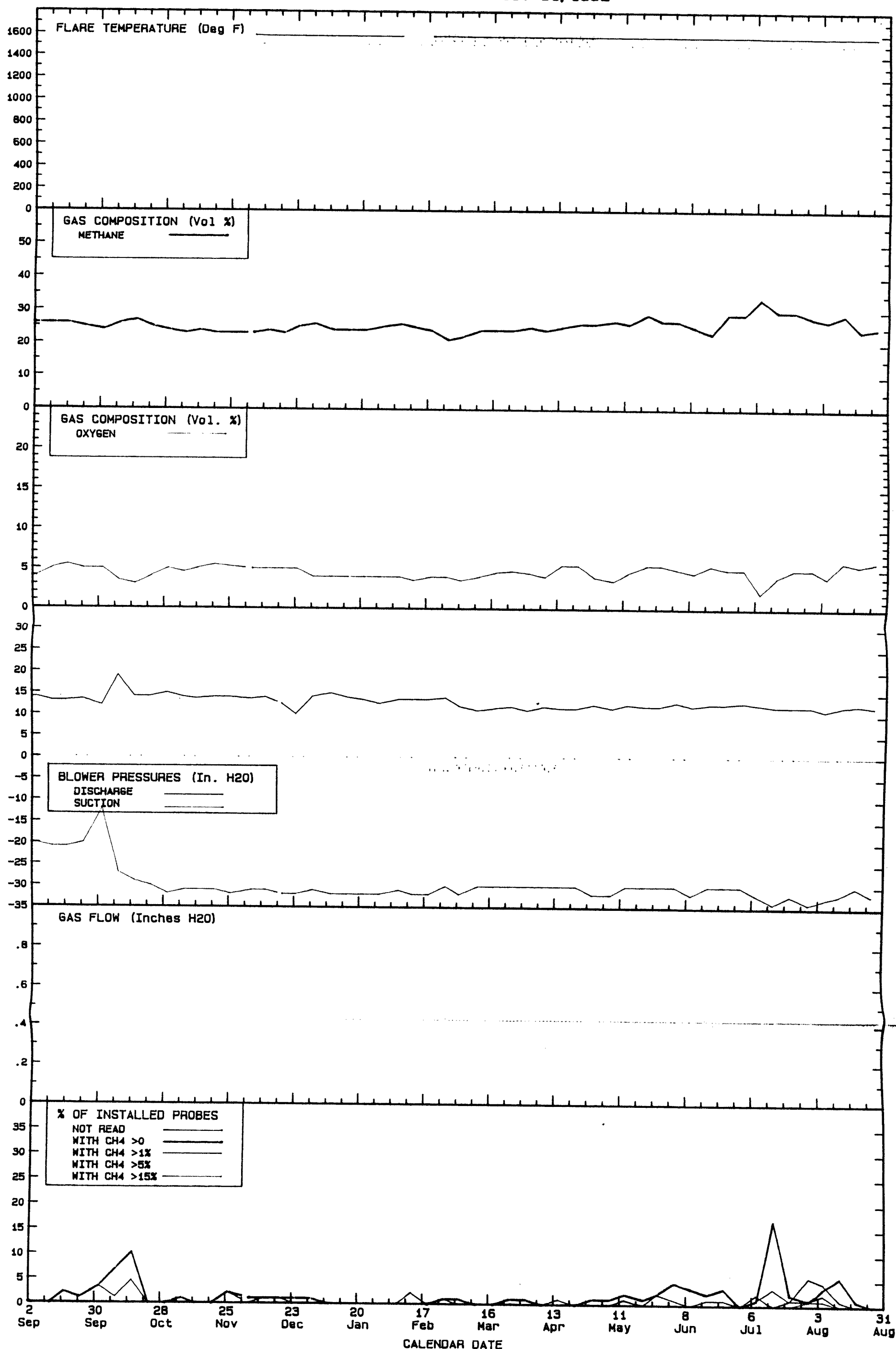
HEWITT SELF STORAGE  
Unit Mix, Occupancy, Rent Schedule \*

Type	Total #	# Rented	% Occupancy	Mo. Scheduled Rent	Mo. Scheduled Total	Mo. Actual Total
5X10	40	39	97.5	\$ 40	\$ 1,600	\$ 1,560
6X10	84	83	98.8	45	3,780	3,735
8X8	70	30	42.8	45	3,150	1,350
8X10	156	65	41.7	60	9,360	3,900
10X10	80	75	93.8	75	6,000	5,625
10X20	14	14	100.0	125	1,750	1,750
8X20	<u>98</u>	<u>85</u>	<u>86.7</u>	<u>100</u>	<u>9,800</u>	<u>8,500</u>
Subtotal	542	391	72.1		\$35,440	\$26,420
RV	<u>230</u>	<u>196</u>	<u>85.2</u>	<u>46 (Avg.)</u>	<u>10,580</u>	<u>9,016</u>
Total	772	587	76.0		\$46,020	\$35,436

\*As of October 22, 1987

EXHIBIT B

EXHIBIT B  
HEWITT LANDFILL  
FLARE STATION / PROBE DATA  
ONE YEAR ENDING AUGUST 31, 1992



# Mandeville & Associates

Energy Recovery Services

May 27, 1983

Mr. George Cosby  
VALLEY RECLAMATION COMPANY  
P.O. BOX 2950  
TERMINAL ANNEX  
LOS ANGELES, CA 90051

Ref: Hewitt Waste Gas Flare Installation

Dear George:

As mentioned by Dick Mandeville there was one final thing that we feel can be done to the flare in order to increase flame temperature. Currently some heat is lost through the outside flame housing. We estimate that the total heat loss through the steel housing is approximately two million BTU's per hour or approximately five percent of the total input heat. Under ideal conditions this two million BTU's per hour would be capable of raising the gas temperature a maximum of 60<sup>0</sup>F and more likely would raise it between 25 and 40 <sup>0</sup>F. This is based on 20% methane in the landfill gas and having 8% excess oxygen in the flue gas. The approximate cost of the Flare insulation would be \$4000.00.

As you can see the return on investment in terms of increase temperature is small. Insulation is only advised if we are certain that the odors are coming from the flare exhaust and not from some other point around the flare or leakage through the blowers shaft seal. We ran a very quick approximate maximum temperature achievable utilizing 20% methane gas with 5% excess oxygen in the exhaust stream. We came up with a total maximum temperature of around 1510 <sup>0</sup>F. From the data that Gary was obtaining after he and Les Gilbert of Mandeville and Associates adjusted the Flare, it appears we are very close to the maximum obtainable temperatures at this point in time.

There is still one additional method that can be used to increase the Flare

May 27, 1983

Page 2

George Cosby

temperature substantially but again it is quite expensive. I am hesitant to even mention this a second alternative due to the high cost and doubt that it would ever be installed as a result. This alternate technique would be to utilize a second gas blower pumping air through economizer tubes located over the top of the Flare and then recirculating this very hot air back in as the primary air to the burner. By using this type of arrangement, considerable BTU's can be reclaimed thus increasing the flame temperature as high as 2000 to 3000 °F should the material selections be made capable of withstanding the temperatures involved. We would anticipate installation of this type costing a minimum of twenty thousand dollars. One major disadvantage of this type of configuration is that the NOX levels will be raised significantly.

George, I am aware that this all sounds very discouraging in terms of how to best improve the incineration process in the Flare at Hewitt landfill. I think that the most realistic and best alternative for you would be to work on improving methane quality to the Flare by balancing the field. I think for the current needs any one of four people at Mandeville and Associates would be qualified for performing this job this includes Dick Prosser, Dick Mandeville, Hugh Walker, and Don Quinn. We feel from both an experienced stand point as well as a price stand point Hugh Walker would be the best selection for any on going monitoring that may take place at Hewitt.

Sincerely,



Richard Prosser

RWP:cmd

SCREENING QUESTIONNAIRE FOR INACTIVE SOLID WASTE DISPOSAL SITES  
Health and Safety Code Section 41805.5

Company performing site maintenance Cal Mat Properties, Inc.

Mailing address 3200 San Fernando Road, Los Angeles, California 90065

Contact person George Cosby Telephone number (213) 258-2777

## SITE HISTORY

Date site started receiving waste: early 1950's Date Site stopped receiving waste: 1962

Percent of site filled by:

January 1, 1960 90% January 1, 1970 100%

January 1, 1980 100% January 1, 1984 100%

Was the waste received by this site ever burned on a routine basis? YES ☒ NO

If yes, provide the following:

Date site started burning on a routine basis:

Date site stopped burning on a routine basis:

Has landfill gas migration ever been detected off site? ☒ YES ☐ NO

If yes, describe the event(s) in detail including date(s). (Attach additional pages if necessary.)

Trace quantities (approximately 1%) of methane were detected along the southerly and easterly portions of the site perimeter in the early 1970's. A landfill gas migration control system has been installed around the entire perimeter of the site, and gas concentrations have been zero since.

Have landfill gas odors ever been detected off site? YES ☒ NO

If yes, describe the event(s) in detail including date(s). (Attach additional sheets if necessary.)

On two occasions, in 1980 and 1983, odors in the vicinity of the site were reported to the South Coast Air Quality Management District (SCAQMD), but they were never identified as landfill gas or as coming from the site.

Has any landfill gas, ambient air, or gas migration testing ever been conducted at the site? ☒ YES ☐ NO

If yes, summarize the testing and the results including date(s). (Attach additional sheets if necessary.)

SCAQMD has reports on file from current Rule 1150.2 tests.

Has this site ever been subject to any enforcement action by any Federal, state, or local agency as a result of underground gas migration or gaseous emissions to the atmosphere?

YES ☒ NO

If yes, summarize the enforcement action(s) and reason(s) including date(s). (Attach additional sheets if necessary.)

The only fine ever levied against the site was a \$1,000.00 fine paid to SCAQMD for extra gas extraction wells being installed without permit.

## SITE DESCRIPTION

Type of fill (Circle appropriate line)

Canyon

Pit

Area (Trench)

Other-Describe

Provide estimate for:

Total Site Acreage 57 acres

Waste Disposal Area Acreage 50 acres

Volume of Waste (cubic yards)

Quantity of Waste (tons) estimated 10 million to

Minimum Depth of Waste (feet)

Maximum Depth of Waste (feet) 100 feet

Average Depth of Waste (feet) 70 feet

Average Thickness Of Existing Top Cover (feet) 8 feet to 25 feet (no surcharge placed on site at closure. Extra volumes added to keep surface level for drainage).

Does This Site Have A Liner? YES NO

If Yes, Describe:

Type of Cover Material Dirt

Provide a map to scale showing the boundaries of the total site and the waste disposal area.

Identify all existing land uses on this site. (Circle appropriate item(s)).

Single family residential

Hotel

Multi family residential

Park

Commercial

Undeveloped

Industrial

Other (specify)

Hospital

Self Storage Units

School

Vehicle Storage

For any undeveloped areas of this site, what land uses are currently proposed? (Circle appropriate item(s).)

Single family residential

Hotel

Multi family residential

Park

Commercial

Industrial

Other (specify)

Hospital

None

School

### WASTE DESCRIPTION

Estimate of Solid Waste Received (Total of entries for residential, commercial, industrial, demolition, and other should add up to 100%.)

% Residential 40-50      % Commercial 25-30

% Industrial 25-30      % Demolition 5-10

% Other

Describe material under "other" and give its percentage.

Material

Percentage

Were liquids ever accepted at this site?

YES

**NO**

If yes, describe all liquids received, their corresponding volumes and the disposal methods employed such as injection, evaporation ponds, containers, codisposal, etc. (Attach additional sheets if necessary.)

Liquid

Gallons

Disposal method

Were hazardous wastes in greater than household amounts ever accepted at this site?

YES ☒ NO

If yes, describe all hazardous wastes received and the corresponding volumes. (Attach additional sheets if necessary.)

Hazardous Waste

Volume

## SURROUNDING LAND USE

Give the distance in miles (to the nearest 0.01 mile) to the nearest:

Occupied building

Describe the Building and Use

.01 mile

Residential

Residential Area .01

School Unknown

Hospital 5.0

Park 1.5

Shopping Center 2.0

Business .2

Public Thoroughfare adjacent

Provide an aerial photograph or topographic map showing the surrounding area within two miles of the solid waste disposal site's perimeter. The photograph or map must identify all land uses in the area and highlight areas of high population such as housing, schools, restaurants, and shopping centers. For areas that are currently undeveloped, the proposed land uses must be shown.

What is the population within two (2) miles of the perimeter of the site? Indicate the source of the information and the date of the data. (Possible sources include the county planning agency and the 1980 Federal Decennial Census)

Population 25,000 est. Source See Below

Date 11/87

#### ADDITIONAL INFORMATION

Attach a copy of any waste discharge permits under which the site operated.

Please provide any comments or additional information which you feel will assist in evaluating your site.

Full Migration Collection System in place.

The City of Los Angeles inspects the site monthly (latest inspection was in July).

Methane readings in all perimeter probes are zero.

Note: Population information is an estimate compiled from data supplied by Los Angeles City Planning Department, Los Angeles County Planning Agency, U.S. Census Bureau.

#### PERSON COMPLETING THIS FORM

Signature

Printed Name George Cosby

Title Vice President

Company Name Cal Mat Properties, Inc.

Date

Address 3200 San Fernando Road

Phone (213) 258-2777

City, State, ZIP Los Angeles, California 90065

## OPTIONAL QUESTIONS

### LANDFILL GAS COLLECTION SYSTEM

Is a landfill gas collection system installed? ☒ YES ☐ NO

If yes, provide the following information:

Date system installation completed \_\_\_\_\_ Date system started operating \_\_\_\_\_

Is the system currently operating? ☒ YES ☐ NO

If no, explain why.

Percent of time system is on line 99%

Name of company operating the system Cal Mat Properties, Inc.

Mailing address 3200 San Fernando Road, Los Angeles, California 90065

Contact Person George Cosby

Title Vice President Telephone number (213) 258-2777

APCD or AQMD application and permit numbers:

Application number N/A System installed before permits were required.

Permit number N/A System installed before permits were required.

System Design (Circle applicable items)

☒ Vertical wells

☐ Horizontal Collection Trenches

☒ Perimeter migration control system

☒ Interior migration control system

Gas recovery system, interior collection only

Gas collection system capacity in CFM 2.5 MCFD  $\approx$  1736 CFM

Disposition of collected landfill gas (Circle applicable items.)

☐ Vented to Atmosphere

☒ Flared

☐ Sold as Fuel

☐ Used as Fuel on Site



**JOHN ZINK  
COMPANY**

International Headquarters  
P.O. Box 702220  
Tulsa, Oklahoma 74170  
(918) 747-1371

Western Regional Office  
11540 South Street, Suite 69  
P.O. Box 2047  
Cerritos, California 90701  
L.A. (213) 563-1151 Local (213) 402-0119

April 6, 1988

Mandeville & Associates  
526 Hofgaarden Street  
City of Industry, CA 91744

Attention Mr. Richard Prosser

Gentlemen:

Subject: Calmat Landfill  
Stack Extension  
John Zink Reference F804-801LA

We are pleased to quote on a stack extension to the flare presently in operation at Calmat supplied on Order 1-850-1746.

Item 1 - Equipment

One (1) 5'-0" O.D. by 10'-0" tall stack section extension complete with insulation and rain cap.

Item 2 - Field Work

- Unload flare stack extension.
- Remove existing rain cap from flare.
- Weld additional 10'-0" section to top of flare.
- Install insulation at weld joint.
- Install rain cap on new extension piece.
- Touch up painting.

Total price for Items 1 and 2 . . . . . \$8,740.00

Work can be completed within eight (8) weeks after receipt of an order.

Should you have any questions, please feel free to contact us.

Yours very truly,

JOHN ZINK COMPANY

*Richard E. Bell*

Richard E. Bell (600)

lss

cc: John Zink Company - Tulsa  
Flare Division  
Attn: J. Alfred

J. Keeler - Engineering Services

Shipping Address: 4401 South Peoria Avenue, Tulsa, Oklahoma 74105

Telex: 497414

Telecopier: (918) 747-2163

13 November 1987

To: George Cosby

From: Richard W. Prosser

Subject: M&A No. 830  
Hewitt Landfill Invoice

North Hollywood

Hewitt

From

Activities for the month related to the flare bid specifications,  
and bids for the Hewitt Landfill project. We have attached  
copies of the bids for your review.

Attachments

(213) 693-0798

(213) 698-9432

Telex: 67-7373

## **SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

October 23, 1987

Mandeville & Associates  
Energy Recovery Services  
526 Hofgaarden  
City of Industry, CA 91744

ATTN: JOHN HORN  
818-369-2224

SUBJECT: HEWITT LANDFILL  
HOLLYWOOD, CALIFORNIA  
CALMAT SPEC. 9830-71-0063 REV 0

John:

Please accept this as Sur-Lite's firm-fixed price quotation complying with subject specifications. This quotation is firm for 120 days.

1. THE 24' HEIGHT WILL ASSURE THAT NO FLAME SHALL EXTEND BEYOND SEVEN FEET DOWN FROM TOP OF FLARE HOUSING. TURN DOWN 8 TO 1
2. BURNER ARRANGEMENT AND DAMPER DESIGN WILL PROVIDE FOR 13% METHANE.  
STAINLESS STEEL HEADS WILL PROVIDE FOR THE 100 PPM H2S CONCENTRATION.  
24' HIGH WILL PROVIDE FOR 1/2 SECOND RETENTION TIME  
MAXIMUM GAS BACK PRESSURE THROUGH VALVE FLAME ARRESTOR AND BURNERS WILL NOT EXCEED 6" W.C. @ 1736 SCFM.
3. SUR-LITE FLARES WILL MEET SCAQMD AND MANDEVILLE SPECIFICATIONS AND STANDARDS.
4. ELECTRICAL CONTROLS WILL BE LIMITED TO THE FOLLOWING:  
UV SCANNER (HONEYWELL)  
T.C. PER SA710045 REV. 3  
REPLACEMENT WELDED TC WIRES  
PILOT SOLENOID PER SPEC SHEET MOUNTED ON FLARES  
MOD MOTOR AND DAMPER BE SPEC  
SUR-LITE PILOT AND SPARK IGNITOR  
IGNITION TRANSFORMER PER SPEC (NEMA 4 BOX)
5. PILOT WILL BE PROPANE FIRED - NO AUXILIARY FUELS - NO PROPANE TANK QUOTED.
6. PAINT PER SPEC SKIN TEMP LESS THAN 250 DEGREES F.

F.O.B. Santa Fe Springs, CA. All prices subject to change without notice.

COMBUSTION IS THE PRIME SOURCE OF PROCESS ENERGY — COMBUSTION IS OUR SPECIALTY.

(213) 693-0798  
(213) 698-9432  
Telex: 67-7373

## **SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

NOISE LESS THAN 85 DBA @ THREE FEET.

PRICE INCLUDES SEVEN COPIES OF MANUALS, SEVEN COPIES OF SPARE PARTS LIST, STRUCTURAL CALCULATION SIGNED BY REGISTERED ENGINEER.

9. PRICE INCLUDES:  
MOTOR OPERATED DAMPERS (SUR-LITE MANUFACTURED),  
THERMOCOUPLE TYPE "K"  
2" SIGHT PORTS (PILOT)  
2" SIGHT PORTS (MAIN FLAME)  
TWO 4' FEMAL COUPLINGS, 5 FEET FROM TOP, 90 DEGREES APART  
3 - 3/4" COUPLINGS  
ONE 5" FROM TOP  
ONE .3 OF SECOND ABOVE BURNER  
ONE AT MIDPOINT  
4" CASTABLE REFRACTORY SIDES AND BOTTOM  
LADDER WITH ANTICLIMB  
CONDUIT CLIPS  
REMOVABLE PILOT  
FLAME ARRESTOR  
ELECTRIC BLOCK VALVE FAIL CLOSED WITH SWITCHES
10. TWO EACH SUR-LITE MODEL 30 LANDFILL FLARE  
8' OD X 24' TALL  
EACH FLARE DESIGNED FOR 1000 SCFM FLOW

PRICE: \$60,000.00 TOTAL

ONE EACH 10" GROTH FLAME ARRESTOR MODEL

\$ 3,500.00 TOTAL

ONE EACH 10" GROTH AUTOMATIC SHUTDOWN VALVE

PRICE: \$ 3,250.00 EACH

TWO SETS MOTOR OPERATED DAMPERS  
12 GAUGE STEEL  
120 V POWER 4-30 AMPUT TC  
AUXILIARY COUPLINGS  
LADDER  
PILOT

PRICE: \$ 4,800.00 EACH

P.O. Box 8124 Santa Fe Springs, CA. All prices subject to change without notice.

COMBUSTION IS THE PRIME SOURCE OF PROCESS ENERGY — COMBUSTION IS OUR SPECIALTY

(213) 863-0786  
(213) 868-8432  
Telex: 87-7373

## **SUR-LITE CORPORATION**

8124 Allport Avenue • Santa Fe Springs, California 90670

ALL PRICES ARE QUOTED F.O.B. SANTA FE SPRINGS, CALIFORNIA.

THE ABOVE PRICE DOES NOT INCLUDE STATE SALES TAX AND/OR FEDERAL, CITY, OR COUNTY TAX, LICENSING FEES, OR PERMIT FEES, IF APPLICABLE.

**TERMS:**

30% DUE WITH PURCHASE ORDER  
30% DUE WITH DRAWING APPROVAL  
30% DUE WITH READY TO SHIP DATE  
10 DUE NET 30 DAYS

If you have any questions, or need further assistance, please do not hesitate to contact us. Thank you for your interest in our products.

Very truly yours,

John R. Birmingham  
Vice President  
Sur-Lite Corp.

JRB/tcs

U.S. Patent Pending. All prices subject to change without notice.

COMBUSTION IS OUR SPECIALTY — COMBUSTION IS OUR SPECIALTY.

Western Regional Office  
11540 South Street, Suite 69  
P.O. Box 2047  
Cerritos, California 90701  
L.A. (213) 563-1151 Local (213) 402-0119

October 20, 1987

Mandeville & Associates  
526 Hofgaarden Street  
City of Industry, CA 91744

Attention Mr. John Horn

Gentlemen:

Subject: Calmat Hewitt Landfill - Hollywood, California  
John Zink Reference F710-801LA

Thank you for considering the John Zink Company. Based on your formal request, we are pleased to offer our system as described in the following commercial and technical attachments:

John Zink Company equipment being offered provides the following advantages:

1. Proven experience in flaring landfill gas.
2. Proven experience in enclosed flare design.
3. Equipment meets SCAQMD requirements.
4. Fifty plus years of combustion experience.

We appreciate the opportunity to quote on your requirements, and look forward to working with you on this project.

Please let us know if you have any questions, or if we can be of service.

Yours very truly,

JOHN ZINK COMPANY

  
Richard E. Bell

lss

Attachments

cc: John Zink Company - Tulsa  
Flare Division  
Attn: Jim Alfred

(1) <u>Design Conditions</u>	<u>Low-BTU Case*</u>	<u>High-BTU Case*</u>
A) CH <sub>4</sub>	13%	21%
CO <sub>2</sub>	11%	17%
N <sub>2</sub>	62%	53%
O <sub>2</sub>	15%	9%

\* Rate vs CH<sub>4</sub> concentration per performance envelope in specification.

- B) Inlet Pressure - 6" W.C. at 1736 SCFM Flow.
- C) Min. Combustion Temperature - 1400°F.
- D) Min. Retention Time - 0.5 sec.
- E) Flowrate:

<u>Maximum</u>	<u>Minimum</u>
1736 SCFM	347 SCFM

- F) Maximum emissions for flare will not exceed the following:

NOx: 90 lbs/day  
Carbon Monoxide: 500 lbs/day  
Non-Methane Hydrocarbons: 68 lbs/day

Flare System:

- (A) One (1) ZTOF Flare, Size 8'-6" O.D. x 25'-0" O.A.H.

Material:

- Shell carbon steel plate, A-283, 3/8" min. thick.
- Rain Cap - 304 SS
- Refractory - 8 lb. cerwool blanket, 2 in. minimum, 304 SS pins and keepers.

NOTE: Outside shell temperature will not exceed 250°F at 1400°F combustion temperature.

- Burner assembly with internal flame arrestor elements complete with a KE-1 Pilot Assembly.
- Paint: Exterior carbon steel surfaces on:
  - Sandblast: SP-6
  - Prime: Dimecot 9 inorganic zinc
  - Finish: Amercote 891 high heat silicone aluminum.
- Three (3) 3/4" couplings
- One (1) 1" U.V. connection
- Two (2) 2" sight port assemblies
- Two (2) 4" sample ports
- One (1) thermocouple connection
- One (1) ladder assembly with locking device and safety harness attachments.

- One (1) lot of clips for thermocouple conduit.
- Structural: Per UBC, 1982 edition exposure C, and per location

NOTE: These units will be structurally designed so that a minimum of 10 feet of additional stack may be added in the future.

An additional 10 foot of stack will affect the temperature control capabilities of the ZTOF.

- (B) -One (1) Honeywell U.V. Scanner and sensor tube with one (1) spare sensor tube per "Safeguard System Data Sheet".
  - Five (5) thermocouples per Drawing SA-71-0045.
  - One (1) pilot solenoid valve per specification S828-11-71-0008.
  - Two (2) Ruskin 12 ga. damper assemblies with each having a Honeywell Modutrol M744 actuator mounted.
  - Spark ignitor located on the KE-1 Pilot Assembly.
  - Webster 612 ignition transformer mounted in a NEMA 4 housing with manual ignition pushbutton and remote contacts.
- (C) One (1) 10" Posi-Seal Butterfly Valve complete with an ITT General Electric-Mechanical spring return, fail closed, actuator.
- (D) One (1) 10" Groth Model 7628-10-11-F00 Flame Arrestor Assembly, all aluminum construction.

#### Commercial

##### A. Pricing:

A.1	ZTOF Flare as described in Technical Section A . . . .	\$24,050.00
A.2	Shipped loose controls as described in Technical Section B . . . . .	\$ 3,700.00
A.3	Inlet valve as described in Technical Section C . . .	\$ 2,620.00
A.4	Flame Arrestor as described in Technical Section D . .	<u>\$ 3,200.00</u>
	TOTAL	\$33,570.00

As long as exit gas temperatures are below 1800°F, no ionized gas glow will be seen above the flare stack. With landfill gas flares operating at 1400 to 1500°F and the flame kept within the design limitations, there will be no visible flame or ionized gas.

All prices are F.O.B. Factory, freight not included, and per attached terms and conditions. Any retainer will be covered by letter of credit as agreed on Job SA-1029-1-77-007.

Mandeville & Associates

Page -4-

October 20, 1987

JZ File F710-801LA

B. Estimated freight to jobsite for the flare system is approximately \$2,500.00 with a total weight of 14,000 pounds.

C. Excluded from this quotation are:

- Installation, erection, or start-up.
- Foundation design.
- Control items other than those specifically listed.
- Taxes, fees, or permits.

D. Delivery:

- Three to four (3 to 4) weeks for approval drawings after receipt of purchase order.
- Six to eight (6 to 8) weeks for shipment after release by Mandeville for fabrication.

NOTE: Inlet valve required ten to fourteen (10 to 14) weeks lead time.

E. Payment Terms:

Payment: Invoice will be issued upon notification that material is ready for shipment and is due net thirty (30) days.

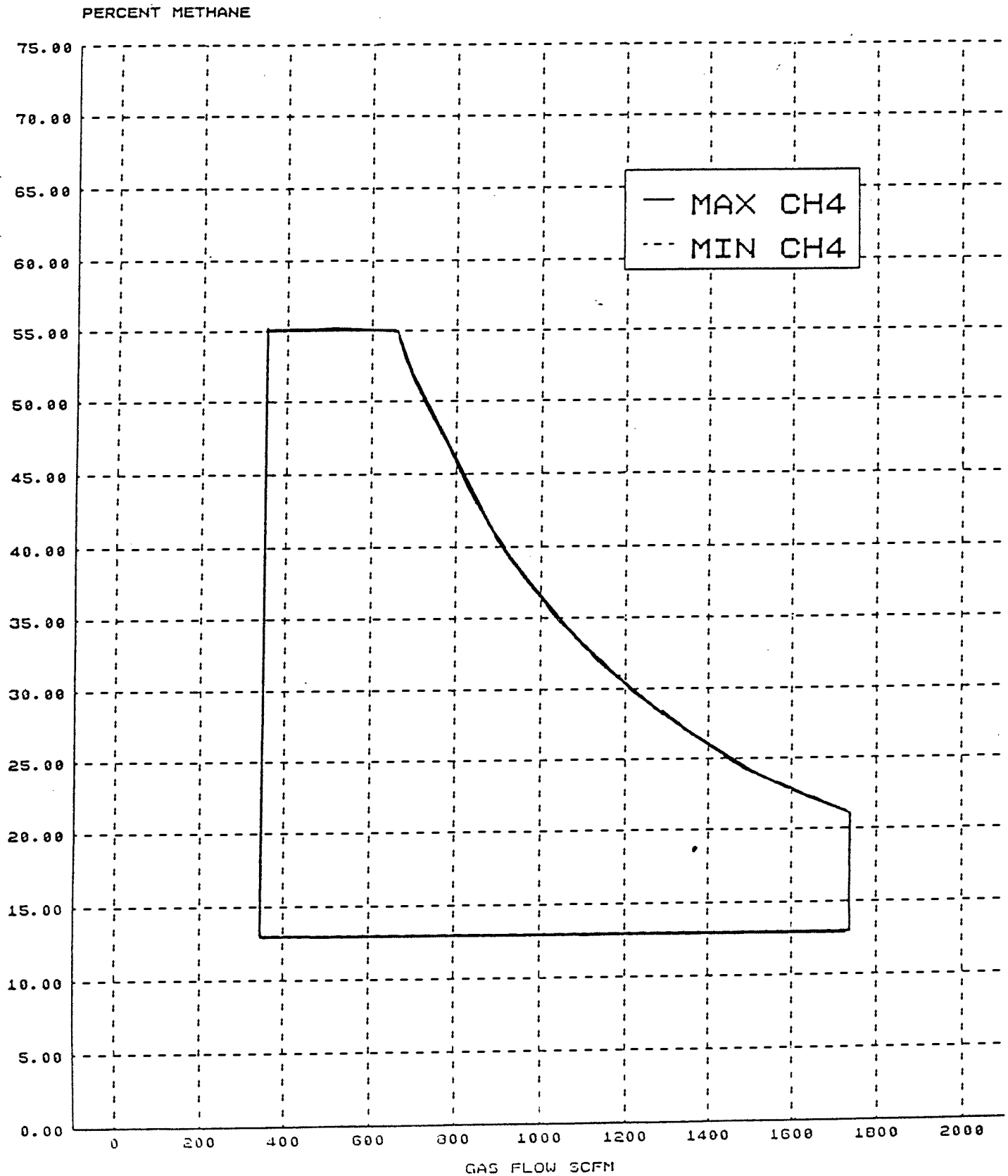
Prices are firm for the quoted delivery. Should delivery be delayed past the quoted delivery by acts of Buyer or its agents, the quoted price will be subject to escalation.

In addition, should delivery be delayed past the quoted delivery by acts of Buyer or its agents, vendor shall have the right to invoice and be paid for materials on hand, fabrication performed and services rendered.

Should changes be required by Buyer or its agents after the initial drawing review which result in additional engineering or drafting costs, these will be invoiced to you at the rate of \$35.00 per drafting hour and \$50.00 per engineering hour. Increases in fabrication costs that will result from these changes will be presented to you and must be approved before work commences.

# FIGURE 1

## FLARE PERFORMANCE ENVELOPE



## Standard Terms of Sale

### 1.0 ACCEPTANCE

- 1.1 No orders for John Zink Company merchandise shall be binding until accepted by written acknowledgement by John Zink Company at its home offices in Tulsa, Oklahoma. The terms of sale contained herein apply to the accompanying quotation and any accepted order resulting therefrom. Some of the terms set out here may differ from those in Buyer's purchase order and some may be new. John Zink Company's acceptance is conditional upon Buyer's assent to the terms set out herein in lieu of those in Buyer's purchase order. John Zink Company's failure to object to the provisions contained in any communication from Buyer shall not be deemed a waiver of these provisions. Any changes in the terms contained herein must specifically be agreed to in writing by an executive of John Zink Company before becoming binding on either John Zink Company or the Buyer.

### 2.0 DELIVERY

- 2.1 John Zink Company will use its best efforts to make shipments on the date or dates designated, but shipment dates are approximate and are based upon prompt acceptance of this proposal and receipt of all necessary information. Unless otherwise stated, all shipments are made F.O.B. John Zink Company or point of manufacture. All risk of loss or damage of goods in transit are borne by the Buyer unless otherwise stipulated. All claims for breakage, damage or shortage should be made to the carrier within ten (10) days. Shipments shall be made in the manner and by the carrier requested by Buyer, but where questions arise concerning suitability of carriers, the decision of John Zink Company shall be final.
- 2.2 Without incurring any liability or waiving any claims for damages it may have against Buyer, John Zink Company may refuse to make, or delay making delivery in any of the following events:
- (a) Buyer fails to comply with any of the terms of any order or contract outstanding with John Zink Company;
  - (b) Such refusal or delay is caused by circumstances beyond the control of John Zink Company, including but not limited to acts of God or of the public enemy, fire or other casualty, strikes, labor difficulties, acts or omissions of Buyer, labor or material shortages and failures or delays of others or subcontractors in delivering materials;
  - (c) Buyer engages in or consents to liquidation, commission or any act of insolvency, appointment of a receiver of assets or assignment for the benefit of creditors, or if the Buyer becomes the subject of any bankruptcy or insolvency proceedings; or
  - (d) Buyer requests and John Zink Company consents in writing to changes or modifications in the equipment covered hereby.

### 3.0 WARRANTIES AND LIABILITY

- 3.1 John Zink Company warrants with respect to the equipment sold hereunder that such will be free of defects in workmanship or materials, will be of the kind designated, and will perform in accordance with specifications when John Zink Company has agreed in writing to undertake full responsibility for the design. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF JOHN ZINK COMPANY. JOHN ZINK COMPANY NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH THE SALE OF JOHN ZINK COMPANY EQUIPMENT. IN NO EVENT SHALL JOHN ZINK COMPANY BE LIABLE FOR ANY LOSS, DAMAGE OR EXPENSE, DIRECTLY OR INDIRECTLY RESULTING FROM THE USE OF ITS EQUIPMENT, INCLUDING WITHOUT LIMITATION, CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITY OF ANY NATURE WHATSOEVER.
- 3.2 Equipment not manufactured by John Zink Company is subject only to the warranties of John Zink Company's vendors. John Zink Company hereby assigns to Buyer all rights in such vendor and disclaims any liability whatsoever in connection with such equipment. John Zink Company is not liable for non-performance due to, nor replacement of parts rendered defective by corrosion, erosion, improper operation, or installation, nor for failure or defective performance due to fouling. Repairs or alterations made by other than John Zink Company without John Zink Company's prior written consent shall void all warranties. John Zink Company is not liable for the cost or results of repairs or alterations made by others without John Zink Company's prior written consent.
- 3.3 John Zink Company agrees to help defend any charge of patent infringement by a third party against its customers by reason of use of the equipment manufactured and sold by John Zink Company; provided, however, that the liability and responsibilities of John Zink Company do not extend to situations where equipment manufactured and sold by John Zink Company is used with other apparatus or equipment for carrying out a process or provides a combination of elements which is deemed to infringe a method patent or a patent directed to combination of elements and owned by a third party.
- 3.4 John Zink Company warranties terminate one (1) year after the equipment is accepted or put in service or eighteen (18) months after shipment, whichever first occurs. If within such a period any such equipment shall be proved to be defective, such equipment or parts shall be repaired or replaced at John Zink Company's option. John Zink Company's obligation hereunder shall be limited to such repair or replacement F.O.B., its factory, or point of manufacture, with any labor for replacement of the parts to be for the account of others, and shall be conditioned upon John Zink Company's receiving written notice of any alleged defect within ten (10) days after its discovery and at John Zink Company's option, return of such equipment or parts prepaid to its factory.
- 3.5 The foregoing warranties and liabilities may not be altered except by an agreement signed by an executive of John Zink Company. ANY LIABILITY OF JOHN ZINK COMPANY IS HEREBY EXPRESSLY LIMITED, IN THE AGGREGATE, TO THE PURCHASE PRICE OF THE PART IN QUESTION. The foregoing warranty shall not obligate John Zink Company to provide reimbursement for transportation, removal, installation, or any other expenses which may be incurred in connection with repair or replacement of any equipment or parts sold by John Zink Company.
- 3.6 Buyer shall pay damage and expense to John Zink Company caused by Buyer's acts or omissions hampering or delaying John Zink Company's performance.
- 3.7 In preparation of its proposal leading to issuance of a purchase order by Buyer, John Zink Company agrees to use due diligence in establishment of costs of materials, parts and labor which may be involved for delivery within the time limits as set by the proposal and accepted by the Buyer. If, due to circumstances beyond the control of John Zink Company and in order to meet a fixed delivery date, the costs for labor, parts or material shall be in excess of normal, Buyer has the option of payment of the excess costs as shown or acceptance of delayed delivery.
- 3.8 If, in the judgment of John Zink Company, the financial condition of Buyer at any time does not justify continuation of production or shipment on the terms of payment originally specified, John Zink Company may require full or partial payment in advance and, in the event of the bankruptcy or insolvency laws, John Zink Company shall be entitled to cancel any order then outstanding and shall receive reimbursement for its cancellation charges.
- 3.9 Until such time as John Zink Company has received payment in full for equipment or parts sold, John Zink Company shall have a security interest therein. The Buyer agrees to extend such reasonable cooperation as John Zink Company may require, including the execution of financing statement or other documents in order for said security interest to be perfected as against third parties. In the event of default by Buyer, John Zink Company shall have available all rights

(OVER)



ATTACHMENT A

**SCHEDULE OF  
DRAWINGS AND PER DIEM RATES**

1. Price includes five (5) prints or one (1) sepia of approval drawings, five (5) prints or one (1) sepia of final drawings and five (5) copies of the Operation Manual, unless otherwise specified. Additional copies of the above items will be furnished at \$3.00 per print and \$5.00 per sepia. The price for additional Operating Manuals will be based on the complexity of the specific equipment.
2. John Zink Company will supply the services of a start-up engineer within the contiguous United States at a nominal rate of \$500.00 per day to a maximum of 10 hours per day for weekdays and non-holidays, plus living and traveling expenses. The hourly rate for more than 10 hours per day is \$60.00 per hour. For Saturday, Sunday, or holidays, the daily rates shall be 1½ times the normal rates. After 10 days, the normal rate becomes \$750.00 per day.
3. John Zink Company will supply the services of a start-up engineer outside the contiguous United States at a nominal rate of \$750.00 per day to a maximum of 10 hours per day for weekdays and non-holidays, plus living and traveling expenses. The hourly rate for more than 10 hours per day is \$70.00 per hour. For Saturday, Sunday, or holidays, the daily rates shall be 1½ times the normal rates. After 5 days, for Sunday and company scheduled holidays, the daily rate shall be 2 times the normal rates. After 5 days, the nominal rate becomes \$1,000.00 per day. After 10 days, the nominal rate becomes \$1,500.00 per day.
4. Prices quoted above are in U.S. dollars and are firm for 30 days after which they are subject to change without notice. Current rates will be confirmed at the time such services are requested.



ATTACHMENT B

**STANDARD CONDITIONS OF SALE  
FOR ENGINEERING SERVICES**

All engineering services shall be furnished by John Zink Company (hereinafter referred to as John Zink) to act in an advisory capacity to the Purchaser in accordance with the following terms and conditions of sale.

**1.0 DOMESTIC OR EXPORT RATES**

From the day the representative leaves his basing point up to and including the day of his return to his basing point, payment shall be made at the rate indicated in the proposal for each day.

**2.0 RATE ADJUSTMENT** Rates will be adjusted to those in effect at the time the service is performed unless specified in the proposal.

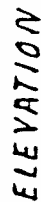
**3.0 EXPENSES**

All necessary expenses incurred by the representative, including but not limited to transportation, traveling costs, living expenses, and/or medical attention comparable to that offered in the U.S. shall be provided and paid for by the Purchaser.

**4.0 INDEPENDENT CONTRACTOR**

John Zink shall be considered an independent contractor in respect to all work herein provided for and the representative furnished by John Zink under this agreement will not in any sense be considered an employee of the Purchaser. The service engineer may be recalled, returned, or replaced at any time at the sole discretion of the John Zink Company. John Zink shall not be liable for damages for injury to property of persons unless attributed solely to the negligence of the John Zink representative. In no event shall John Zink be liable for consequential damages.

**5.0 SUBCONTRACTORS** Engineering services for equipment not manufactured by John Zink will be in accordance with the above conditions with all costs to be for the account of the Purchaser.



~ N TRUE ORIENTATION ~

F710-8011A

TYPICAL, LAND EIL